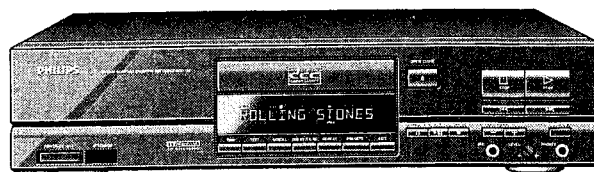


Service
Service
Service

/00B
/01B
/05B



Service Manual

DIGITAL
dcc
COMPACT CASSETTE

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TECHNICAL SPECIFICATIONS

GENERAL

Power supply

/00B	: 230 V $\pm$ 15%
/01B	: 110, 127, 220-230, 240 V
	: Selectable by voltage selector
/05B	: 240 V $\pm$ 10%

Power consumption

Standby mode	: < 5 W
Maximum	: < 25 W
Dimensions(WXDXH)	: 435 x 300 x 90(excl. feet)
Weight	: 4 Kg

DIGITAL I/O:

Format	: AES/EBU format according IEC958
	: (consumer format)
Sampling frequency	: 32 / 44.1 / 48 kHz ($\pm$ 0.1%)
Unbalanced cinch	: 75 Ohm

ANALOG IN(digital recording from analog input)

Input sensitivity	: 150 mVrms
Max. input voltage	: 2.5 Vrms(= 2 V + 2 dB)
Input impedance	: 50 kOhm
Levelmeter resolution	: 2 dB
	: 3 dB
	: 5 dB
	: 10 dB
Sampling frequency	: 44.1 kHz
Record level settings	: 0 dB up to -28 dB, 14 steps of -2 dB
Overload	

DIGITAL OUT

Format	: AES/EBU format according IEC958
	: (consumer format)
Sampling frequency	: 32 / 44.1 / 48 kHz($\pm$ 100 ppm)
Unbalanced cinch	: 75 Ohm

ANALOG OUT DCC PLAYBACK

Sampling frequency = 44.1 kHz unless otherwise specified

Output voltage	: 2 Vrms $\pm$ 2 dB(0 dB dig.)
Frequency range	: 20 Hz..14.5 kHz, fs = 32 kHz
	: 20 Hz. 20 kHz, fs = 44.1 kHz
	: 20 Hz..22 kHz, fs = 48 kHz
amplitude linearity	: $\pm$ 0.1 dB
channel unbalance	: < 0.85 dB(1 kHz)
output resistance	: 300 Ohm
phase non-linearity	: < 0.2 degrees(1 kHz)
outband attenuation	: 50 dB above 30 kHz
channel separation	: > 90 dB(1 kHz)
	: > 85 dB(20 Hz..20 kHz)
muting(search)	: > 98 dB
SNR A-weighted	: 102 dB
SNR unweighted	: 98 dB
DR	: > 97 dB(1 kHz)
	: > 95 dB(20 Hz..20 kHz)
THD + Noise	: > 81 dB(20 Hz..20 kHz)

ANALOG OUT ACC PLAYBACK

Noise reduction system according DOLBY B/C NR
(for playback only)

output voltage	: 500 mVrms $\pm$ 2 dB(200 nWb/m)
channel unbalance	: < 3 dB(1 kHz)
output resistance	: 300 Ohm
amplitude linearity	: typ. 40 Hz...16 kHz within 3 dB
channel separation	: 20 dB(1 kHz, rel.tracks)
	: 59 dB(non rel.tracks)
muting(search)	: 90 dB
SNR	: Fe
	: CR
(DIN reference level, 315 Hz/0 dB)	
unweighted	: - 48 dB
	: - 50 dB
weighted	: - 53 dBA
	: - 55 dBA
noise reduction	: Dolby B
	: Dolby C
	: + 8.5 dB
	: + 17 dB
THD	: < 2%(1 kHz/-10 dB)

HEADPHONE OUTPUT DCC PLAYBACK

Sampling frequency = 44.1 kHz

output voltage	: > 5 Vrms
channel unbalance	: < 4 dB
output impedance	: 120 Ohm
load impedance	: 32 / 120 / 600 Ohm
output power	: 38 / 68 / 48 mW
frequency range	: 20 Hz..14.5 kHz, fs = 32 kHz
	: 20 Hz..20 kHz, fs = 44.1 kHz
	: 20 Hz..22 kHz, fs = 48 kHz
amplitude linearity	: +1/-2 dB

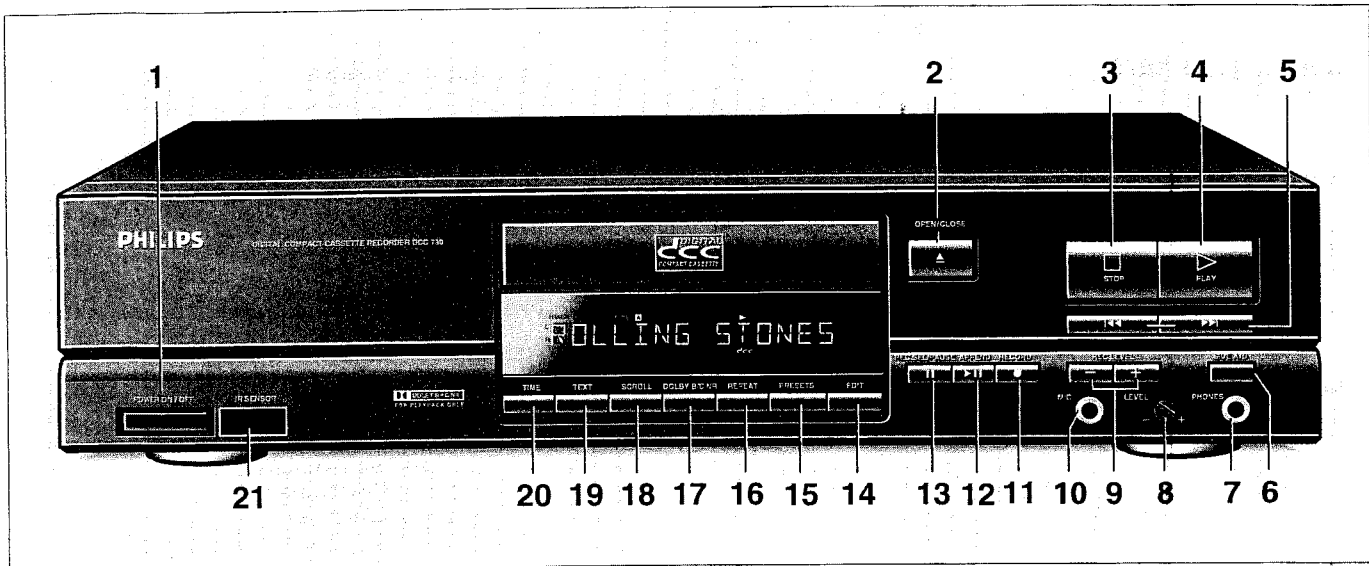
Audio specification at 4Vrms in case of 600 Ohm load

output sep.(typ.)	: 75 dB(1 kHz)
	: 65 dB(0-20 kHz)
muting	: 100 dB
SNR	: 86 dB
DR	: 86 dB(1 kHz)
THD+N	: 82 dB(1 kHz)

MICROPHONE IN

Input sensitivity	: 20 mV for max. level
	: 3 mV for ref. level
Input impedance	: 10 kOhm
Microphone impedances	: 200 - 600 - 2000 Ohm
Amplitude linearity	: $\pm$ 1 dB(200 Hz - 20 kHz)
S/N ratio	: typ. 75 dB(BW = 20 kHz)
THD + Noise	: typ. 65 dB(1 kHz)

OVERVIEW OF KEYS



KEYS

- 1 POWER ON/OFF** to switch the recorder on and off.
- 2 OPEN/CLOSE** to open and close the tray loader (also push tray to close).
- 7 PHONES** socket for headphone connection.
- 8 LEVEL** to adjust the volume when using headphones
- 10 MIC** socket for a microphone. (automatic source selection)
- 17 DOLBY B/C NR** to select Dolby Noise Reduction only on conventional music cassettes
- 18 SCROLL**
 - to scroll text information or to enter the demo mode.
 - to adjust the scroll speed when lyrics information is selected.
- 19 TEXT**
 - to select text information
 - to enter the title programming mode.
- 20 TIME** to select time and level information

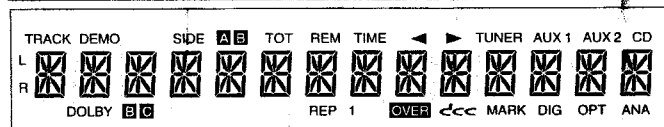
RECORDING CONTROLS

- 9 REC LEVEL +/-**
 - to adjust the recording level (analog and microphone input).
 - to select characters during title programming
- 11 RECORD ●**
 - to start the actual recording. (only in RECORD PAUSE mode)
 - to effectuate edit or title record
- 12 APPEND ►►** to search for the end of the latest recording after which the recorder switches to the RECORDING PAUSE mode.
- 13 SELECT PAUSE II** to select the recording source and to enter the RECORDING PAUSE mode.
- 14 EDIT** to enter the edit mode. see 'EDIT'

PLAYBACK CONTROLS

- 3 STOP ■** to stop any action
- 4 PLAY ►** to start playback or recording.
- 5 ◀◀**
 - to search for the start of the current track (press once <0.5 sec.) (also for music cassettes)
 - to search for previous tracks (press more than once)
 - to wind the tape backward (press >0.5 sec.)
- ▶▶**
 - to search for the start of the next track (press < 0.5 sec.) (also for music cassettes)
 - to wind the tape forward
- 6 SIDE A/B** to reverse the tape travel direction (press >0.5 sec.)
- 15 PRESETS** to enter the preset mode. see 'PRESETS'
- 16 REPEAT** to repeat the current track, to repeat all tracks or to switch repeat off.
- 21 IR SENSOR** infra red remote control eye

DISPLAY INDICATIONS



- ▶ on during playback or recording
- ▶ blinking during forward search
- ◀ blinking during backward search
- TUNER, AUX1, AUX2, CD** indicates the selected recording source (user selection).
- REP (1)** lights up to indicate that the current track (REP 1) or all tracks (REP) will be repeated.
- OVER** lights up if the recording level is too high
- MARK** lights up each time a marker is read, written or erased on the tape.
- DIG, OPT, ANA** indicates the corresponding input with the selected recording source. see 'PRESETS'

INSTRUCTIONS FOR USE

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DCC BASICS	PLAYBACK DISPLAY RECORDING	Notes on playback.....7 Playback.....8 Displaying text information.....9 Displaying time information.....9 Counter Reset.....9 Making your first recordings.....10 Recording examples.....11 No recording is possible.....11
DETAILED FUNCTION DESCRIPTION	INSTALLATION PLAYBACK FUNCTIONS RECORDING FUNCTIONS	Presets.....12 Record level setting memory.....13 Record level display.....13 Adjusting the record level setting.....13 Track search.....14 Wind/Rewind.....14 Title search.....14 Reversing the playing direction.....14 Repeat.....14 Dolby NR.....14 Edit.....15 Title programming.....16 Microphone recording.....16
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TROUBLESHOOTING	FUNCTIONS DISPLAY MESSAGES	Operational problems.....18 Problems with DCC cassettes.....18 Problems with analog cassettes.....18 18

The type plate can be found on the back of the unit.

This product complies with the radio interference requirements of the European Community.

Recording is permissible insofar as copyright or other rights of third parties are not infringed.

SUPPLIED CABLES:

- 1 x mains cable
- 2 x hifi connection cable (cinch)
- 1 x digital cable (cinch)

1 MAINS CONNECTION

- Before connecting the unit to the mains, proceed as follows:
 - If the unit is equipped with a VOLTAGE selector, first adjust the voltage selector to the local mains voltage.
 - If the unit does not have a voltage selector, first check if the mains voltage as shown on the type plate on the back of the unit corresponds to your local mains voltage. If it does not, consult your dealer or service organisation.
- After all other connections have been made, connect the mains lead to the AC MAINS socket and insert the mains plug in the wall socket.

2 ANALOG CONNECTIONS

- a ANALOG PLAY** - Connect these sockets via the supplied hifi connection cables to the DCC INPUT sockets of your amplifier. You can also use the TAPE 1, TAPE 2 or AUX INPUT of your amplifier but never the PHONO INPUT socket.
- b ANALOG REC** - Connect these sockets via the supplied hifi connection cables to the DCC OUTPUT sockets of your amplifier. You can also use the TAPE 1/2 or AUX OUTPUT sockets of your amplifier.

3 DIGITAL CONNECTIONS

The DCC730 can be connected to your CD player via the digital or via the optical socket, depending on the available outputs on your CD player. Recordings through a digital connection guarantee optimum recording quality; record level setting is then not necessary.

DIGITAL IN - Connect this socket via the supplied digital cable to the corresponding digital output socket of e.g. CD and DAT or to the digital selector of some Philips amplifiers.

OPTICAL IN - Pull out the protective plug from the socket. Connect this socket via an optical lead (SBC1150) to the corresponding optical output socket of e.g. CD and DAT.

NOTE: when you are not using the DIG IN connections, for the CD, the PRESETS of the DCC must be changed by using the preset key.

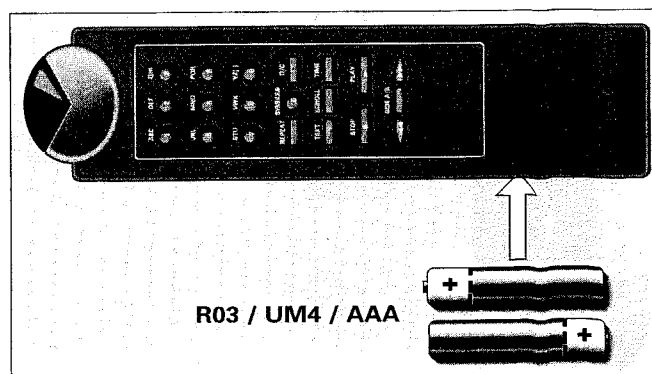
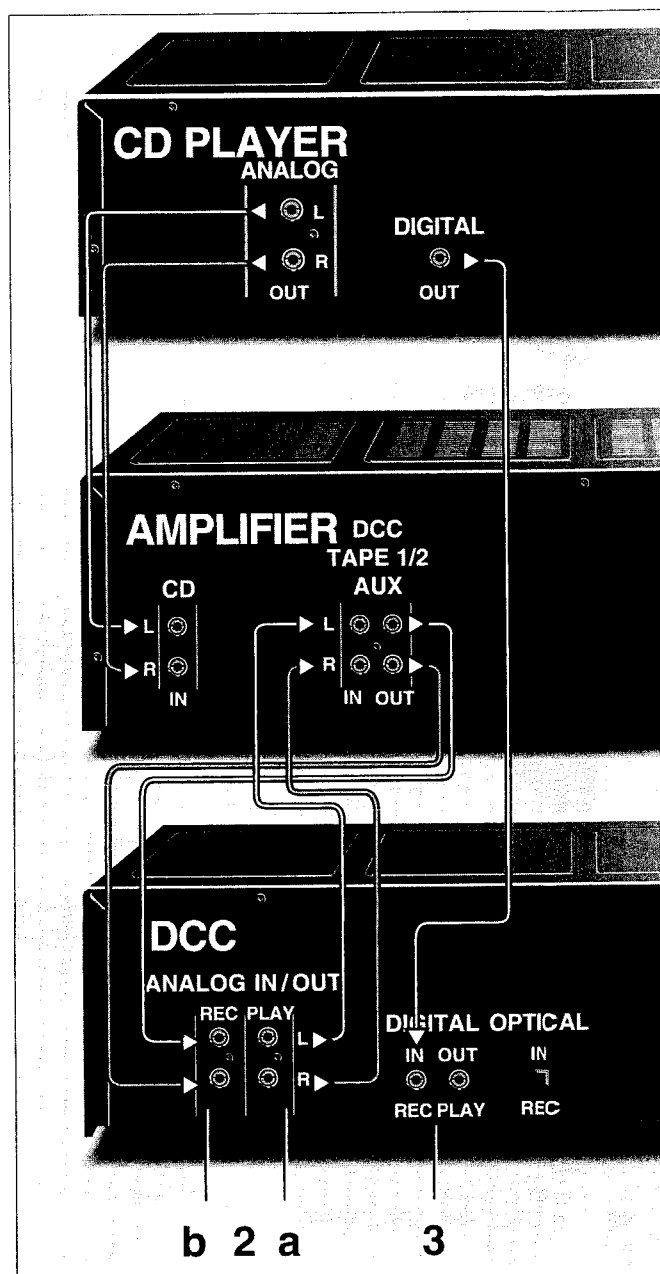
☞ For this refer to the chapter PRESETS.

OPTIONAL CONNECTION

DIGITAL OUT - Connect this socket via a cinch cable to the corresponding digital input socket of e.g. an amplifier with D/A convertor or another digital recorder.

4 REMOTE CONTROL

Open the battery compartment and insert two batteries, type R03, UM-4 or AAA-cells.

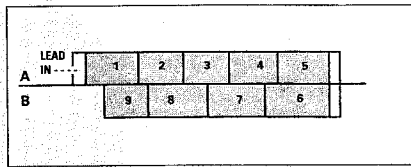


CASSETTE TYPES



DCC ALBUM

PLAY
~~RECORD~~

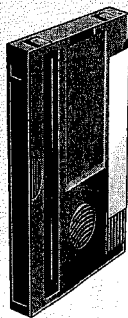


- continuous play
- continuous tracknumbering
- * LEAD IN: automatic search to start of first track; negative time will be displayed.

When using a DCC album the following information is available:

- album-info: title, artist
- tracktitle-list
- song lyrics (if present on cassette)
- tracknumbers
- track time, absolute time, total remaining time.
- direct track search
- title search

This information is continuously repeated in the music track and can be retrieved within a short time.

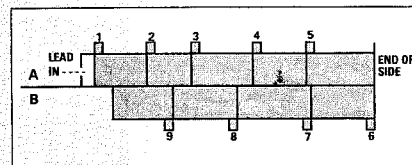


DCC

PLAY
RECORD

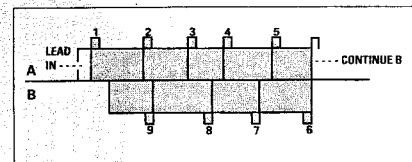
3 formats can be recorded:

1. MC like format



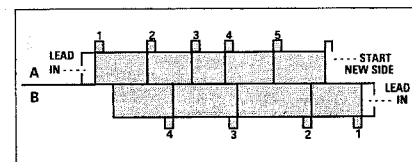
- automatic autoreverse at end of side
- this autoreverse action may occur in the middle of a track.

2. Single album format



- continuous play
- continuous tracknumbering
- autoreverse between tracks
- continue B
- ☞ see EDIT

3. Dual album format



- fast wind to new side
- independent tracknumbering per side
- ☞ see EDIT

NOTE:

A recording started on side A will automatically continue on side B, if limited recording space (< 1 min.) is available on side A. In order to reduce the loss of recorded information due the trailer tape, the DCC recorder switches to side B slightly before side A is completely full. During playback this may result in a silent 'gap'. It is advised to activate 'RENUMBER' after finalising the recording session (see: 'EDIT, RENUMBER'). 'RENUMBER' guarantees correct track numbering and direct change to side B during playback.

When using a DCC the following information is available:

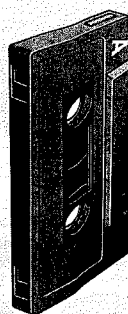
- absolute time
- track number at start of track
- track time
- remaining time on current side
- sequential track search

OPTIONAL

- title at start of track
- ☞ see TITLE PROGRAMMING
- renumber
- ☞ see EDIT

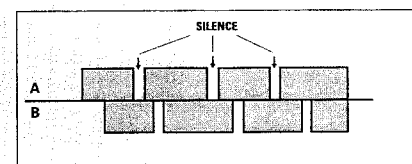
NOTE:

If a recording is started in a blank area, the player is not able to write tracknumbers and absolute time on the tape. The renumber action is then not possible.



MUSICCASSETTE

PLAY
~~RECORD~~

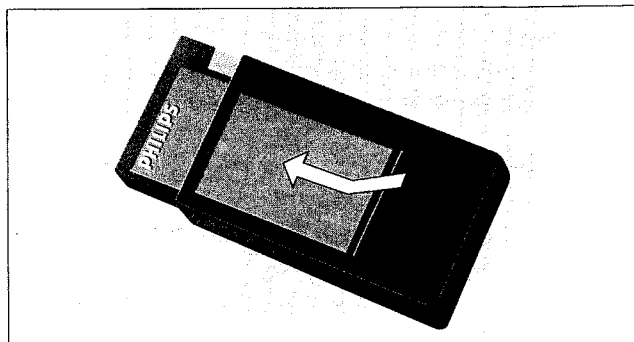


When using a conventional musicassette the following information is available:

- counter setting
- estimated absolute time
- AMS (search of start if tracks are separated with >3 sec. silence).

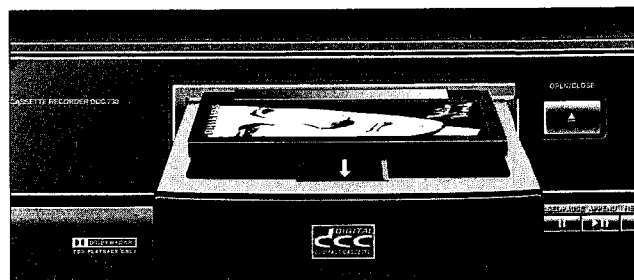
SLIDING OUT A DCC CASSETTE FROM ITS BOX

Press the cassette out with your thumb; push the cassette upwards.

**POSITIONING A CASSETTE IN THE TRAY**

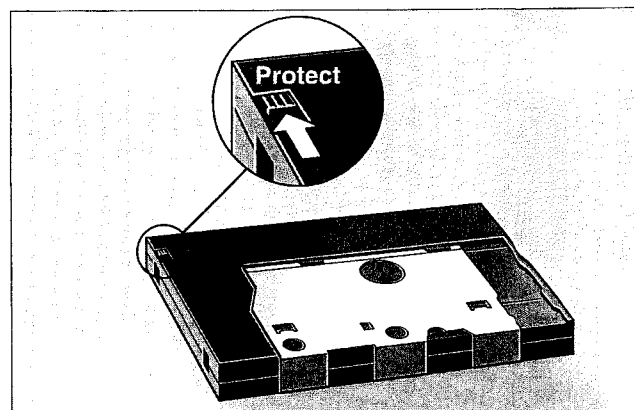
Insert a DCC with the printed side up and protective slider pointed to the DCC-player.

A conventional music cassette should be inserted with the tape pointed to the DCC-player.

**PROTECTING A CASSETTE AGAINST RECORDING**

Accidental overwriting of recordings made on your DCC cassettes can be prevented by sliding the red switch on the back of your cassette upward. No recording will then be possible on both sides of this tape.

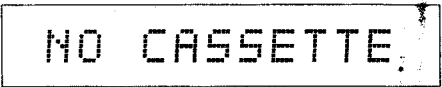
Recording will be possible when the red switch is slid backward again.

**NOTES ON PLAYBACK** (see page 8)

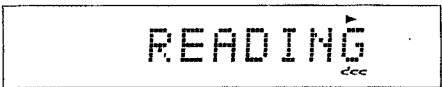
1. At the start of a tape (LEAD IN area) the display may show a negative time indication e.g. -0:11 and the player will wind to the start of the first track.
2. After closing the tray, the player always selects side A of a cassette. You can reverse the tape travel direction with the SIDE A/B key.
3. When you load a cassette and the tape is positioned near the start of a track, the DCC player will read the tape information and reposition the tape to the start of this track. Reading can take a little longer.
4. TROUBLESHOOTING:
What to do in case no sound is heard:
 - Check the connections that are made ( see also INSTALLATION).
 - Check the source selection on your amplifier.
 - Check if the inserted cassette is not a blank DCC.
 - Check if a blank area on the tape is being played back.

Playback of a cassette is similar to operating a CD-player.

- 1 Switch the unit on with the **POWER ON/OFF** key.
The unit checks if a cassette is loaded.
If no cassette is loaded, the display panel shows:
- 2 Press the **OPEN/CLOSE** key to open the tray and insert a cassette.
Close the tray by pressing **OPEN/CLOSE** again or by pushing the tray.
The display panel shows:
The unit now reads the tape. This procedure will take maximum 5 seconds.



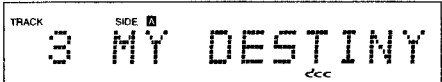
NO CASSETTE



READING



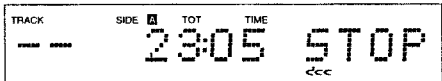
If the unit finds a DCC album, the complete track title will once scroll on the display.
After that the shortened title will appear, e.g.:
(max. 12 characters)



3 MY DESTINY



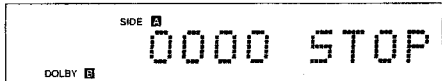
If the unit finds a (user-recorded) DCC, the time is displayed.
The display panel shows for instance:
The track number may not be known as this is recorded at the start of a track.



23:05 STOP



If the unit finds a conventional music cassette, the display shows the counter mode:

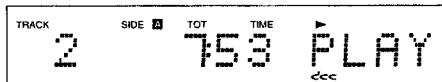


0000 STOP

The display settings can be changed with the TIME/TEXT key.

☞ see also: **DISPLAY**

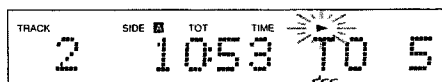
- 3 Press the **PLAY** ► key to start playback.
Playback will start from the present position of the tape.
The display will show for instance:
The play indication ► on the display lights up.



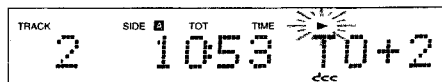
2 7:53 PLAY

- 4 Press the **STOP** ■ key to stop playback.

- 5 Searching for next or previous tracks can be done by shortly pressing the ◀▶ keys.
The play indicator ◀ or ▶ on the display will start blinking.
The display shows e.g.:

2 10:53 TO 5

2 10:53 TO+2

When the ◀▶ keys are pressed > 0.5 sec., the deck starts (re)winding until you release the key.

☞ see also: **PLAYBACK FUNCTIONS**

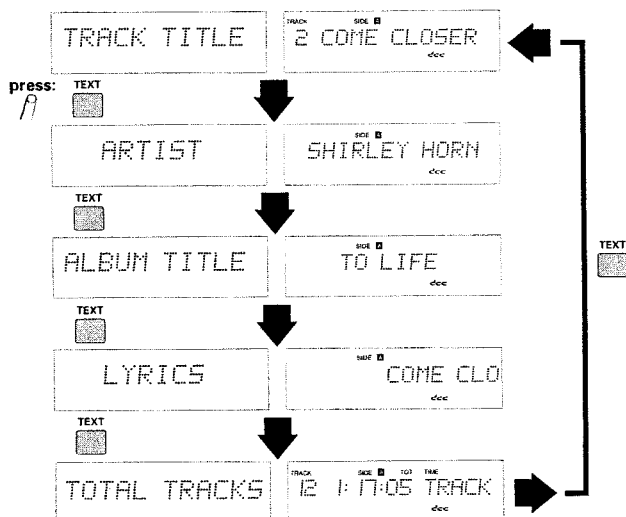
NOTES: ☞ see page 7.

TEXT - TIME

By pressing the **TEXT** or **TIME** key you can select different information to be shown on the display. Different information is available for the different cassette types (see CASSETTE TYPES).

If the display is showing TIME information, pressing the **TEXT** key will result in:

When using prerecorded DCC cassettes:



Lyrics information is not present on all prerecorded DCC cassettes. In this case the topic indication **LYRICS** will stay on the display as long as no synchronized songtext has been detected.

First, the display will show the topic name, then the topic line will be scrolled once and afterwards the shortened topic will be fixed on the display.

When you press the **SCROLL** key the selected text information will once be scrolled again on the display from right to left.

In case you have selected **LYRICS**, you can adapt the scrolling speed (in 9 steps) of the song lyrics to the music rhythm by pressing the **SCROLL** key several times.

The text key is only functional when DCC cassettes are used. When you press this key when you are using conventional musicassettes the display will show

NO TEXT INFO

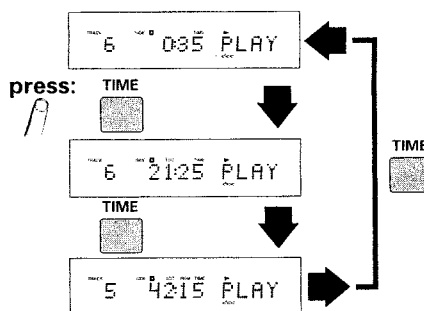
If the display is showing TEXT information, pressing the **TIME** key will result in:



track number and elapsed playing track time

total elapsed time on the tape

total remaining time on the tape

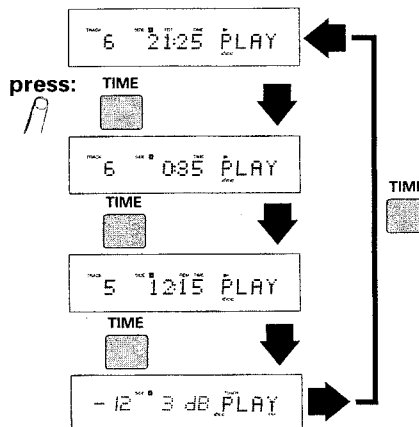


total elapsed time

track time

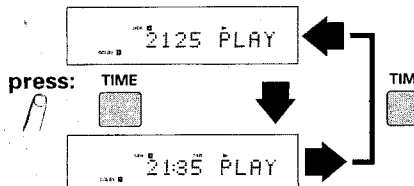
total remaining time on current side

record level setting



counter setting

estimated absolute time



COUNTER RESET

By pressing the **TIME** key for 2 seconds the tape counter will be reset to 0000.

Basically, making recordings on your DCC recorder is similar to making tape recordings on a musicassette.



- 1 Press **OPEN/CLOSE**.
- 2 Insert a **blank** DCC and close the tray.
- 3 Press **BACKWARD** ◀◀ for more than 0.5 seconds.
The deck rewinds and stops at the beginning of the tape.

- 4 Press the **SELECT PAUSE II** key.
 - a The deck writes a buffer area (LEAD-IN).
This buffer area is to guarantee optimum tape-recording conditions and recording of time and track info.
 - b The DCC player will enter the RECORD PAUSE mode and the indicator above the RECORD key will start blinking ☼.

c SOURCE SELECTION:

- The CD player is automatically selected as the source. The digital input is also selected automatically (default setting). Changing this setting can be done with the PRESET key (☞ see PRESETS).
- If you want to record from another source than CD, press the **SELECT PAUSE II** key once more. Each time you press **SELECT PAUSE II** the following recording source will be selected:
The display shows the selected preset input: **TUNER--> AUX1 --> AUX2 --> CD. ANA, DIG or OPT.**
Changing this preset can be done with the PRESET key, ☞ see PRESETS.

- 5 **RECORD LEVEL SETTING:** In case you are recording from a source which is connected via the digital or optical inputs the recording level does not need to and can not be adapted. When you want to record from a source via the analog or microphone inputs, you should check the peak level.
☞ see RECORDING LEVEL.

- 6 Press the **RECORD** key to start recording.
The indicator above the RECORD key will be ON ☼.
The time is continuously recorded and the track number is automatically increased by one.

READING
dcc

SIDE A
--:-- STOP
dcc

SIDE A
LEAD IN
dcc

TRACK 1 SIDE A TOT TIME CD
1 0:00 REC-P
dcc DIG

- 7 To interrupt the recording for a short time, press the **SELECT PAUSE** key.
By pressing the **RECORD** key again, the recording is resumed; a new tracknumber is written on the tape).

TRACK 1 SIDE A TOT TIME CD
1 0:05 REC
dcc DIG

- 8 To stop the recording, press the **STOP** ■ key. The actual music recording stops immediately.
The deck continues to write for a short period to mark the end of the last recording. Afterwards you may find this place on the tape very easily with the use of the **APPEND** ▶▶ key,
☞ see:RECORDING EXAMPLES.

TRACK 2 SIDE A TOT TIME CD
2 0:01 REC
dcc DIG

TRACK 2 SIDE A TOT TIME CD
2 3:05 STOP
dcc MARK

- 9 Press the **BACKWARD** ◀◀ key to rewind the tape. You can now start playback of your recording with the **PLAY** ▶ key.

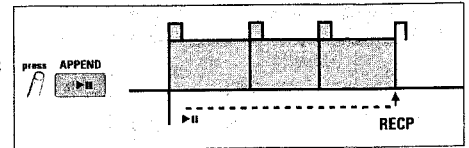
NOTES:

1. In case the display shows **CHECK DIG IN** you should check:
 - if the CD player is switched on and in play mode,
 - if the correct digital connections are made,
 - if the PRESET on the DCC player is set to CD DIG (☞ see PRESETS)
2. When the unit is in RECORD PAUSE mode, you may also use the **PLAY** ▶ key to start the recording.
3. When the **RECORD** key is pressed during recording, a new tracknumber will be written on the tape.

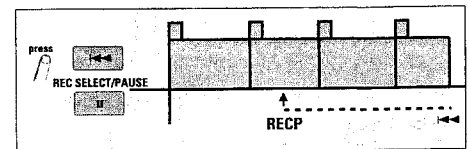
RECORDING ON A PARTIALLY RECORDED DCC

The APPEND function makes it possible to easily continue a recording at the end of your last recording. Track numbering will automatically continue in the right sequence. In case your last recording does not end with silence, it may happen that a very small part of your last recording (max 1 second) is overwritten.

- 1 Press APPEND ►||. The deck will search for the end of the last recording (which was marked when STOP was pressed during recording). APP ► or APP ◀ appears. When this position has been found the last 10 seconds of this music track will be played back (APPEND PLAY), after which the RECORD PAUSE (RECP) mode is entered.
- 2 (Select the correct input source by pressing SELECT PAUSE ||.)
- 3 Press RECORD ● to start the actual recording.
- 4 Press STOP ■ when you want to stop recording.
The recording will be stopped and the deck marks the end of the last recording.

**RECORDING ON A SPECIFIC LOCATION**

- 1 Search for the location on the tape where you want to make a recording.
- 2 **a** Press SELECT PAUSE ||. The deck will enter the RECORD PAUSE (RECP) mode at the current position.
b (Select the correct input source by pressing again SELECT PAUSE ||.)
- 3 Press RECORD ● to start the actual recording.
- 4 Press STOP ■ when you want to stop recording.

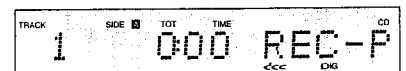


Note: the tape must be positioned at a recorded area.

- In case you start recording on an area of the tape on which no previous recording was made (an blank area), the DCC player will not record time information. The tracknumber will not be shown.
- In case you start a recording in the middle of a track, it can happen that the DCC recorder has not yet read the track number of this track. Correct continuation of the track number-sequence is not possible. The DCC 730 will indicate track number '- - -'. After finalizing the recording session, the 'RENUMBER' function (see: 'EDIT, RENUMBER') can correct the track number sequence.

COMPLETELY OVERWRITING A RECORDED DCC

- 1 Select side A. ➡ see 'REVERSING THE PLAYING DIRECTION'.
- 2 Press BACKWARD ◀◀. The deck will rewind and stop automatically at the beginning of the tape.
- 3 Press SELECT PAUSE ||.



The deck will now write a LEAD IN area at the beginning of side A and will enter the RECORD PAUSE mode.

- 4 (Select the correct input source and adjust the recording level when needed).
- 5 Press RECORD ● to start the actual recording.
- 6 Press STOP ■ when you want to stop recording.
The recording will be stopped and the deck marks the end of the last recording.

1. Using the APPEND key has the following advantages:

- Easy finding of the latest recorded piece of music in order to continue recording at that point.
- Continuous tracknumbering
- Time recording.

2. Using the SELECT PAUSE key has the following advantages:

- Possibility to start recording in the middle of a track.
- In case the RECP key is pressed while the position on the tape is within 2 seconds from the start of a tracknumber, the tape will be repositioned to the start of this track.

3. Press RECORD to actually start the recording:

example: press in following order: APPEND → RECORD (to start recording at end of the latest recording)
or: REC SELECT → RECORD (to start recording at the current position)

RECORDING IS NOT POSSIBLE:

- On a prerecorded DCC
- On a conventional musicassette
- On a DCC which is protected against recording.
➡ see 'PROTECTING A CASSETTE AGAINST RECORDING'.
- When the **COPY PROHIBIT** message lights up on the display.
The DCC deck operates with a **Serial Copy Management System**, which includes that a fully digital copy can be made from Prerecorded digital material but only directly from the original material.
It is not possible to make a digital copy of a digitally copied DCC to another DCC deck. When you want to copy this cassette from one DCC deck to another you can only do this via the analog input sockets.
- When no digital signal is available. The display shows **CHECK DIG IN**. ➡ see 'TROUBLESHOOTING'.

DETAILED FUNCTION DESCRIPTION

INSTALLATION

PRESETS

With the PRESETS function you can control the default settings of the DCC recorder.

- Press the **PRESETS** key to enter the edit mode.
The display shows **SELECT PLAY - REC SELECT - EDIT**, indicating that you can select one of these keys.
- After pressing the respective key the following default settings can be adjusted.

PLAY ▶

- **AUTO PLAY**: playback will always be started automatically as soon as the tray has been closed.
- **AUTO STOP**: playback will not be started automatically.

- Selection can be made with the ◀◀ ▶▶ keys.
- Press **PRESETS** again to store the selected values.

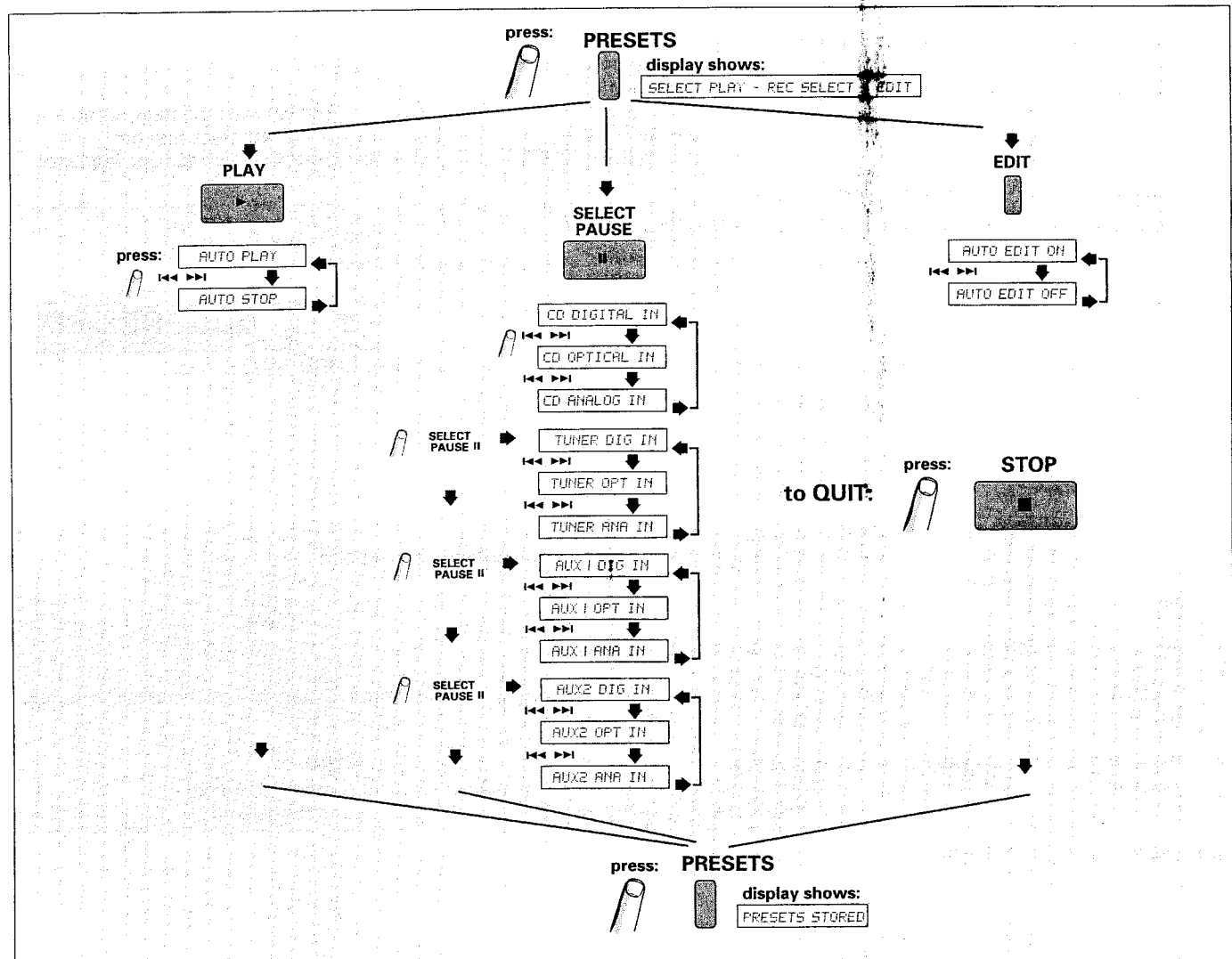
SELECT PAUSE II

- **CD, TUNER, AUX1, AUX2**: selection of recording source
- **DIG, OPT, ANA**: selecting the input: digital, optical or analog

- The recording source can be selected with the **SELECT PAUSE II** key
- The input can be selected with the ◀◀ ▶▶ keys.
- Press **PRESETS** again to store the selected values.

EDIT

- **AUTO EDIT ON**: the DCC recorder will write new track nrs on the tape when 3 sec. silence (<-60dB) is detected during recording from analog or micro input.
When a digital source is connected (via digital sockets) this function is always automatically set to **AUTO EDIT ON**.
- **AUTO EDIT OFF**: the DCC player will not perform automatic track increment.
- Selection can be made with the ◀◀ ▶▶ keys.
- Press **PRESETS** again to store the selected values.

**EXAMPLE:** Changing the input source for CD.

Press PRESETS → Press SELECT PAUSE → Display shows current setting **CD DIGITAL IN** → Select the input e.g. **CD OPTICAL IN** with the ◀◀ ▶▶ keys → Press PRESETS again to store the adjustment. The display shows **PRESETS STORED**.

DETAILED FUNCTION DESCRIPTION

INSTALLATION

RECORD LEVEL SETTING MEMORY

The DCC730 stores the latest record-level setting for each independent source. As such, you do not have to adjust the record level setting each time another source is selected. During installation or when making your first recordings you can check and adjust the record level settings for each connected source.

EXAMPLE:

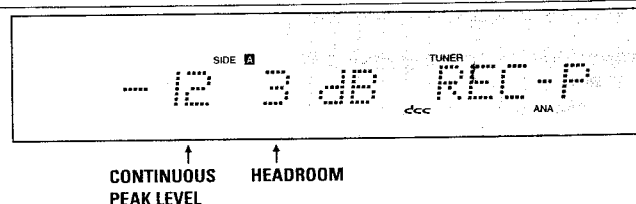
SOURCE		STORED RECORD LEVEL SETTING
CD	DIG IN	Optimal direct digital
TUNER	ANA	Setting nr. 10 LEV 10
AUX1	ANA	Setting nr. 7 LEV 7
AUX2	OPT IN	Optimal direct digital

DISPLAY

RECORDING LEVEL DISPLAY

The peak level can be displayed by pressing:

- **REC LEVEL + or -** ;
The recording level display will be shown temporarily.
10 seconds after REC LEVEL + or - was pressed the display will go back to showing the previous information.
- **TIME** see 'TEXT, TIME'.



CONTINUOUS PEAK LEVEL: is updated every second.

HEADROOM: indicates the absolute highest peak level.
The headroom will be reset:
- when you press **REC LEVEL + or -**
- when you start a new recording

OVER indication: If the level exceeds the 0 dB level, an overload will be indicated and the recorded signal can be distorted. The **OVER** indication will also be indicated on the display when the display is not showing the record level setting, e.g. during a recording.

ADJUSTING THE RECORD LEVEL SETTING

The record level setting for a traditional music cassette was always very critical due to its limited dynamic range. In order to record low signal level, recordings had to be made at maximum recording level. For DCC the Record Level setting is much less critical.

1. Digital/optical input: Record Level setting is not needed. Signals are directly digitally copied which guarantees optimum settings.

2. Analog input: Due to very large dynamic range of DCC, even very low signal levels can be recorded.

It is no longer needed to adjust the level to its *maximum* value. It is even better to keep a safe distance from the maximum value in order to prevent overload (resulting in distortion). The distance from the maximum value is indicated by:

- 1. the continuous peak level:** Recommended value for this continuous level is -9 to -12 dB.
- 2. the headroom:** Recommended value for this head room is 2 dB.

The sensitivity can be adjusted in maximum 14 steps.

The maximum or minimum level is indicated on the display as:

MAX LEVEL or MIN LEVEL

When in RECORD or REC PAUSE mode:

- Press **REC LEVEL + or -** to enter the level-meter display mode.
The recording sensitivity is not yet changed.
- Press **+** to increase the sensitivity of record-setting step by step
- Press **-** to decrease the sensitivity of record-setting step by step

If the level exceeds the 0 dB level, an overload **OVER** will be indicated and the recorded signal can be distorted.
In this case press **REC LEVEL -** to decrease the level.

Adjusting the recording level is only needed when you are recording from a source which is connected via the ANALOG LINE IN sockets or via the MICRO(phone) socket to your DCC 730 (Analog In).

ADVICE:

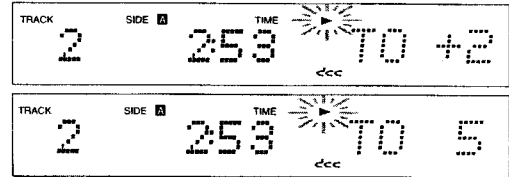
It is recommended always to use the digital input when it is available.
Adjustment of the recording level is then not needed.

DETAILED FUNCTION DESCRIPTION

PLAYBACK FUNCTIONS

TRACK SEARCH

The **◀◀** and **▶▶** keys can be used to search for a particular track on the tape or to scroll through the tracklist (see title search).
 – During the track search the display shows e.g.:



In stop mode:

- Press **◀◀** (less than 0,5 seconds) to search for the start of the current track.
- Press **▶▶** (less than 0,5 seconds) to search for a track next to the current track.

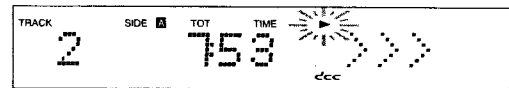
Note: these keys are also functional when using conventional musicassettes (Automatic Music Search). This function reacts to silent passages of at least 3 seconds between the tracks.

WIND / REWIND

Searching for a passage during playback can also be done with the **◀◀** and **▶▶** keys.

In stop mode and during playback:

- Hold **▶▶** pressed down (for more than 0,5 seconds) to wind forward.
 - Hold **◀◀** pressed down (for more than 0,5 seconds) to wind backward.
- When the **◀◀** and **▶▶** keys were pressed during playback, playback will be continued as soon as you release the key.
 During searching time and track information will be displayed.



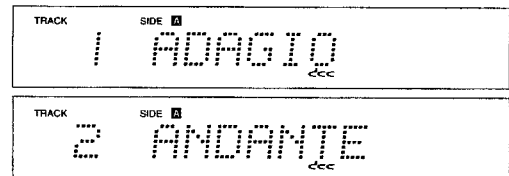
- When the text display is selected and the **◀◀** and **▶▶** keys are activated, the display changes to time indication as long as the search continues. Then the display will show the text information again.

TITLE SEARCH

The **◀◀** and **▶▶** keys can be used to browse through the track-list

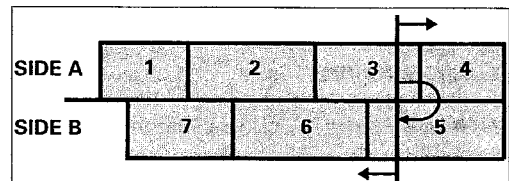
When in stop mode and track title display :

- When you press **▶▶** or **◀◀** while the display is showing the track title, the title of the next or previous track appears on the display.
 Searching for the track does not yet start.
- You can actually search for the track by pressing the **PLAY ▶** key.



REVERSING THE PLAYING DIRECTION

- The SIDE A/B key is used to reverse the tape travel direction.
 This selected side is indicated on the display with SIDE **[A]** or SIDE **[B]**.
- When you press this key during playback, the playing direction will be reversed and playback will be continued at the other side of the tape.



REPEAT

You can use the REPEAT key to replay a particular track or the total number of tracks on the tape.

- Press this key once to repeat the current track.
 The indication **REP 1** will appear on the display.
 Repeating the current track is not possible when you are using conventional analogue cassettes.
- Press this key once again if you wish to repeat all tracks on the tape. The display will show **REP**.
- Press this key another time to switch repeat off again.

NOTE: When analogue cassettes are used, only the function **REP** can be activated. **REP 1** can not be selected.

DOLBY NOISE REDUCTION

The Dolby Noise Reduction function can only be active when you are playing conventional music cassettes.
 With the Dolby key you can switch the Dolby NR system on or off and select Dolby B or Dolby C NR.

Dolby Noise Reduction manufactured under license from Dolby Laboratories Licensing Corporation.
 Dolby and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

DETAILED FUNCTION DESCRIPTION

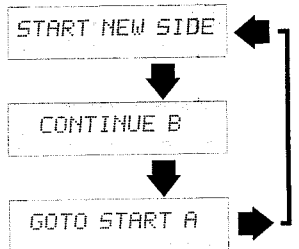
RECORDING FUNCTIONS

EDIT

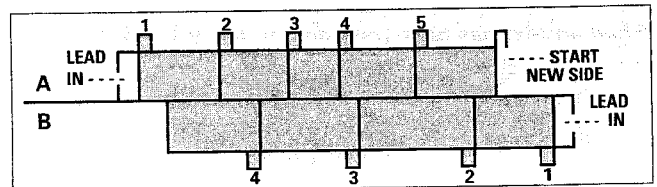
The EDIT function is only possible when you are using non protected user-recorded DCC cassettes. In this mode you can edit the tape formats, delete or create track transition and renumber the tracks.

When in REC PAUSE mode:

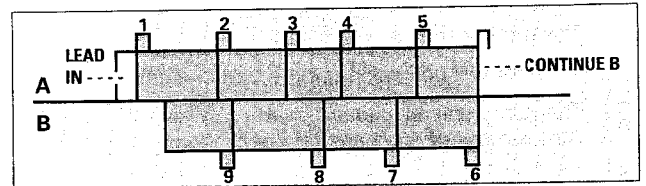
- 1 Press the **EDIT** key to enter the edit mode
- 2 You can select the various EDIT functions by pressing **EDIT** several times
- 3 Press the **RECORD** key to actually edit the tape.



- **START NEW SIDE:** When START NEW SIDE is detected during playback, the deck will automatically wind to the beginning of the next side after which playback will be continued with the first track on the next side. During winding the display will show **TO START B** or **TO START A**.



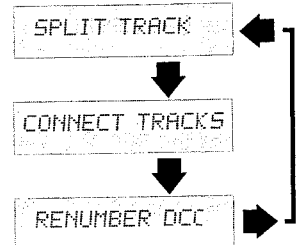
- **CONTINUE B:** mark the position where the tape must be reversed (only possible on side A of the tape). When CONTINUE B is detected during playback, the deck will immediately change to side B after which playback will be continued.



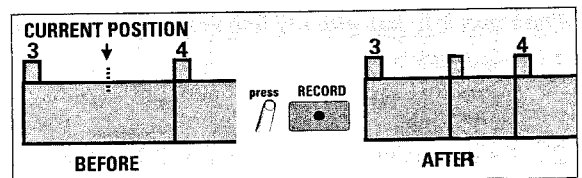
- **GO TO START A:** mark the position on the tape where the deck should start winding to the beginning of side A and stop. When GO TO START A is detected during playback, the deck will wind to the beginning of side A after which the deck stops.

When in STOP mode:

- 1 Press the **EDIT** key to enter the edit mode.
- 2 You can select the various EDIT functions by pressing **EDIT** several times
- 3 Press the **RECORD** key to actually edit the tape.

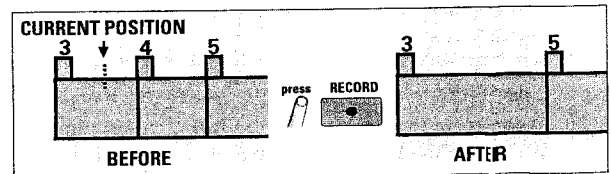


- **SPLIT TRACK:** the DCC starts a new track at the current position. When SPLIT TRACK has been performed a renumber action (see below) is necessary to ensure a correct tracknumber sequence.



- **CONNECT TRACKS:** the current and next track will be connected and recognized as one track. The deck will search for the start of the next track and erase the marker which indicates the start of this track. When tracks have been connected a renumber action (see below) is necessary to ensure a correct track number sequence.

Note: Do not use the 'CONNECT TRACKS' function when positioned at the start of a track.



- **RENUMBER:** renumbering the tape. This action is only possible if track numbers have been recorded on the tape.
 - The 'RENUMBER' function is **always** needed when:
 1. During recording, the deck has automatically switched from side A to side B (see: 'MC like format').
 2. A track has been split into 2 tracks.
 3. Two tracks have been connected to one track.
 - The 'RENUMBER' function **may be** needed when: A recording is started in the middle of an existing track (see: 'RECORDING ON A SPECIFIC LOCATION').
 - As the complete tape will be checked for correct tracknumber sequence, it is best to finalize all edit-actions before renumbering. During the renumber action the display shows the absolute time + 'RENUM'.

When the action is finished the display shows **RENUM COMPLETE**

NOTE: to exit edit



DETAILED FUNCTION DESCRIPTION

RECORDING FUNCTIONS

Note: If a recording is started in a blank area, the recorder is not able to write track numbers and absolute time on the tape. The display will *not* indicate the track number (also not with --). Indication will be similar to a music cassette. The 'RENUMBER' function can *not* correct the track number sequence. Recording of track numbers is only possible when a tape is initialized with a LEAD-IN area.

TITLE PROGRAMMING

On user recorded DCC cassettes, you can record your own titles. The title will be recorded *at the start* of the track.

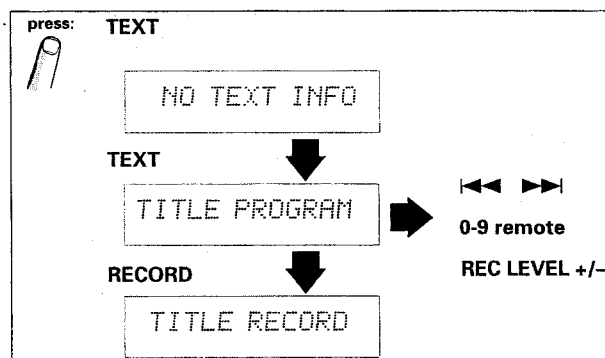
Note: As the title is only recorded at the start of the track, the **NO TEXT INFO** message will appear if the deck has *not* yet read a title.



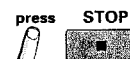
In STOP mode

When no text has been recorded on the tape yet:

- 1 Press TEXT
When a new track is found and no text-info has been recorded yet the display shows **NO TEXT INFO**
- 2 Press TEXT again.
The display shows **TITLE PROGRAM**
A cursor will be blinking at the first character on the display (left).
- 3 The cursor can be moved on the display with the **◀◀**, **▶▶** keys.
A maximum of 40 characters per title can be programmed.
- 4 Programming is either done with the **0-9** keys on the remote control (1=A,B,C, 2=D,E,F, 3=G,H,I, etc.) or with the **REC LEVEL +/-** keys.
 - Press **REC LEVEL +** to scroll through the alphabet characters in the following sequence: A, B, C, etc.
 - Press **REC LEVEL -** to scroll through the alphabet characters in the opposite sequence: Z, Y, X, etc.
 When these keys are pressed for more than 1 second the scrolling speed will be increased.



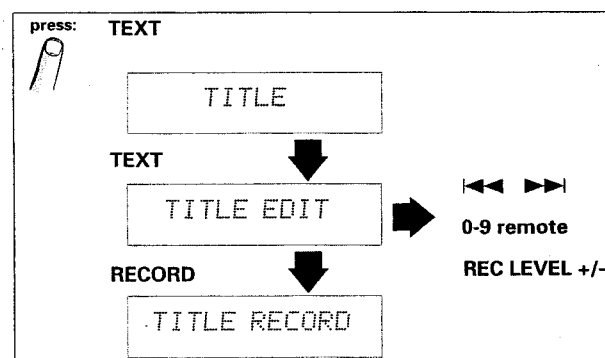
NOTE: to exit title programming



- 5 Press the **RECORD** key to store the title.
The deck will search for the start of the current track and record the track title at the start of this track.
During this time the display will show **TITLE RECORD**

When text info has already been recorded on the tape:

- 1 Press TEXT
When text info has already been recorded the display shows the current title.
- 2 An existing title can be edited by pressing the **TEXT** key again.
The display will first show **TITLE EDIT** and then the current title.
A cursor will be blinking at the first character on the display (left).
This cursor can be moved on the display with the **◀◀**, **▶▶** keys.
- 3 Programming is done with the **0-9** keys on the remote control or with the **REC LEVEL +/-** keys as described above.
- 4 Press the **RECORD** key to store the new title.
The deck will search for the start of the current track and record the track title at the start of this track.
During this time the display will show **TITLE RECORD**



NOTE: to exit title programming



MICROPHONE RECORDING

If a microphone (e.g. Philips SBC 3036) is connected, your DCC 730 will automatically select microphone recording.

If 'howling' occurs when using microphones:

- keep the microphones away from the loudspeakers,
- or reduce the reproduction volume,
- or use headphones for monitoring.

REMOTE CONTROL

- 0-9 – these keys can be used for track selection and for title programming.
- REPEAT** – to repeat the current track, to repeat all tracks or to switch repeat off.
- TEXT** – to select text information and to enter the title programming mode.
- STOP** – to stop any action.
- ◀▶** – when pressed < 0,5 sec.: track search.
– when pressed > 0,5 sec.: wind/rewind.
- O/C** – open/close.
- TIME** – to select time information.
- SCROLL**
– to scroll text information or to enter demo mode.
– to adjust the scroll speed when lyrics information is selected.
- PLAY ▶** – to start playback or recording.
- SIDE A/B** – to reverse the side.

DIRECT TRACK SELECTION with remote control

The 0-9 keys on the supplied remote control can be used to directly select a desired track on the tape. These keys can be activated during the stop mode, when the tray is open, during playback or during the search mode.

The DCC player will wind to the desired track, after which playback will start automatically.

When using DCC user-recorded tapes this function only works if a tracklist is present and has been read by the DCC-recorder.

Direct track selection functions differently for different cassette types. Direct selection of track 1 is always possible.

1. DCC album:

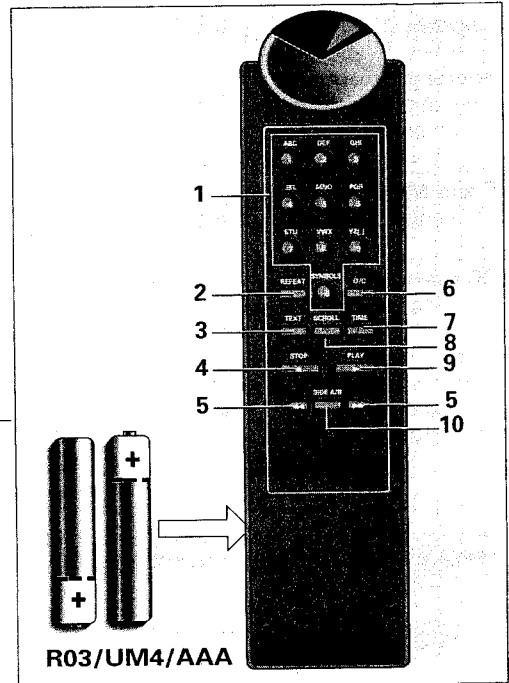
Always functions as soon as the track list has been read; direct side selection

2. DCC user recorded tape:

- Only if the current track number is known; e.g. current track number 3, requested track 8, sequential search to track 8.
- If the current track number is *not* known, the message **NO TRACK INFO** will appear.
- Direct selection of track 1 is always possible.

3. Musicassette:

Only selection of track 1 is possible; for all other tracks the message **NO TRACK INFO** will appear.



MAINTENANCE

GENERAL REMARKS

The DCC730 might influence the quality of a broadcast signal when the radio antenna is located close to the DCC player.

- Keep the radio antenna as far as possible away from the DCC player.

MAINTENANCE OF YOUR DCC RECORDER

- Do not leave the unit for any length of time in direct sunlight or other places where high temperatures can occur, such as in the vicinity of heating apparatus.
- Do not expose the equipment to humidity or rain.
- A chamois leather cloth slightly moistened with water is sufficient for cleaning the deck.
- Do not use cleaning agents containing alcohol, spirits, ammonia or abrasives.

CASSETTE MAINTENANCE

Keep the cassettes at room temperature and avoid leaving them in the sun or too close to magnets and transformers of e.g. recorders, radios, TV's and loudspeakers.

Do not push the tape protection of DCC cassettes aside and avoid touching the tape.

CLEANING CASSETTES

- In principle there is no need to clean the head of your DCC player when you use only DCC cassettes. The use of conventional musicassettes of inferior quality may leave dirt on the DCC head. This can affect the sound quality of DCC cassettes (sound will be interrupted).

Your DCC730 automatically indicates when headcleaning is needed by showing the message **CLEAN HEAD**.

This message can be shown when RECORD PAUSE is entered, during PLAYBACK or after playing many hours with conventional musicassettes.

Special DCC cleaning-cassettes (Philips SBC3500) are available to clean the DCC head.

It is strongly advised not to use conventional cleaning cassettes as they will not clean the DCC head good enough.

WARNING: Do not use DEMAGNETIZE cassettes.

This product complies with the radio interference requirements of the European Community.

Copyright:

Recording or copying is only authorised if there is no violation of copyright or other rights of third parties.

TROUBLESHOOTING

symptom	possible cause	remedy
General problems		
– The unit does not respond to any command.	– Electrostatic charge may cause this problem.	– Switch off the power. – Switch on the power again after a few seconds.
CC and MC cassettes		
– Broken/intermittent playback sound.	– The head section is dirty.	– Clean the head section.
DCC cassettes		
– Distorted signal.	– Recording was made with too high peak level (OVERLOAD).	– Make a new recording with lower peak level.
– Track number or elapsed playing time is not displayed correctly.	– The cassette has been loaded in the middle of one of the tracks.	– Rewind the tape to the start of the track and start playback.
– No track number indication and RENUMBER does not function.	– Recording has not been started with a lead-in area at the beginning of each side.	– You may consider to re-record the tape.

DISPLAY MESSAGE	possible cause	remedy
PRESS STOP	– You have pressed a key during a function which cannot respond to this key	– Press the STOP key
BLOCKED	– For some reason, the compartment cannot be opened or closed (e.g. cassette not correctly inserted, compartment touched an object when it was opened).	– Do not force anything. Try to reset the player by switching ON and OFF again. If the trouble persists, consult your dealer or service station.
WRONG TRACK	– The selected tracknumber does not exist on the tape, playback is continued	– Enter an existing track number
CHECK DIG IN and CHECK OPT IN	– The CD player does not send any signal in 'STOP' mode. – The digital source has failed (i.e. loosened cable or DIG IN is not connected. The unit is switched to STOP. – 'Digital' or 'Optical' has been selected at the unit. If the digital source is missing, recording can not be started.	– Set the CD player into 'PAUSE' mode. – Check the connections and try again. If the problem persists, your digital/optical cable might be broken. Consult your dealer for a new cable
COPY PROHIBIT	– You can not make a digital copy of a source which is already a digital copy of an original music-program. The DCC730 operates with a Serial Copy Management System, which includes that a fully digital copy can be made from prerecorded material. E.g. you can make a digital recording from a CD to your DCC via the digital in- and output sockets. However, it is not possible to make a digital copy of this recorded DCC cassette to another DCC deck.	– When you want to copy this cassette from one DCC deck to another you can only do this via the analogue in- and output sockets. – Select the analog input and start recording again.
NO TEXT INFO	– There is no text information on the tape that has been inserted in the compartment or the information is not known yet.	– Program your own text information or select TIME information)
NO DCC	– You have tried to start recording with an 'ACC'.	– Insert a DCC into the tray.
TAPE PROTECT	– You have tried to start recording with a recording protected cassette.	– Push the red button on the DCC down (towards protective touch slider)
CLEAN HEAD	– There is dust or dirt on the head of your DCC player. This indication may appear during playback/recording or recording pause mode.	– Use a special DCC cleaning cassette to clean the head
RENUM FAILED	– Renumber is not possible when a recording was started on an empty area of the tape (no time info recorded)	– You may consider to re-record the tape
TAPE FULL	– indicates that the recording cannot be continued because the tape is full	– Use a new cassette for recording or rewind the tape to overwrite an existing recording
LOAD AGAIN	– The cassette has not been loaded correctly	– Load the cassette again.

If the trouble persists, even after the remedial action has been taken or if the symptoms are not included in the table, consult the dealer where you purchased the unit.

WARNINGS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

NL

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne"

3-1

ESD



D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).
Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen Sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambio identici a quelli specificati.

3-1

GB

HANDLING DCC-HEADS

CAUTION: The heads are susceptible to electrostatic voltage higher than 150Vdc! The heads are protected from external electrostatic charging by connecting the head flexible cable to the read/write board.
When disconnecting the cable, always place the deck on a bench with required electrostatic discharging measures taken and wear electrostatic discharging band. Moreover, always mount the short-clip on the flexible cable removed.

The heads are also susceptible to strong external magnetic field and the analog output may be affected.
DO NOT USE HEAD DEMAGNETIZER, MAGNETIC SCREWDRIVER OR DEMAGNETIZER CASSETTE!

NL

VOORZORGSMAATREGELEN BIJ DE BEHANDELING VAN DE DCC-KOPPEN.

LET OP: De koppen zijn gevoelig voor een elektrostatische spanning groter dan 150Vdc. Als de kop normaal verbonden is met de Read/Write printplaat, is deze beveiligd tegen externe elektrostatische ontladingen. Zodra deze flex-foil verbinding wordt onderbroken, plaats dan het deck altijd op een werktafel, die voorzien is van elektrostatische ontladings-middelen en draag een elektrostatische ontladings-manchet. Schuif, bovendien, direct na het losnemen de kortsluit-clip over de flex-foil kabel.

De koppen zijn ook gevoelig voor sterke externe magnetische velden, deze kunnen het analoge uitgangsvermogen beïnvloeden.

GEBRUIK GEEN KOP DEMAGNETISEER SPOEL, MAGNETISCHE SCHROEVEDRAAIER OF DEMAGNETISEER CASSETTE!

D

BEHANDLUNG VON DCC-KÖPFEN.

VORSICHT! Die Köpfe sind empfindlich gegenüber elektrostatischen Spannungen ab ca. 150V! Schutz vor Schäden durch statische Entladungen besteht für die Köpfe nur, solange sie über den Flexprint mit dem Lese-/Schreib-Verstärker verbunden sind.
Die Verbindung darf erst unterbrochen werden, wenn der DCC-Recorder auf einer ESD-sicheren Tischauflage steht und nachdem ein ESD-Schutz-Armband angelegt worden ist.
Der vom Verstärker-Print abgezogene Flexprint-Connector muß mit einem Kurzschlußstecker geschützt werden.

Die Köpfe sind ebenfalls empfindlich gegenüber starken äußeren Magnetfeldern; deren Einwirkung kann das analoge Ausgangssignal beeinträchtigen.

Verwendete Werkzeuge müssen antimagnetisch oder entmagnetisiert sein.

IM DCC-DECK DÜRFEN KEINE ENTMAGNETISIERUNGS-CASSETTEN ODER ENTMAGNETISIERUNGS-SPULEN BENUTZT WERDEN!

F

MANIPULATION DES TÊTES DCC

ATTENTION: Ces têtes sont sensibles aux tensions électrostatiques supérieures à 150Vdc. Les têtes sont protégées des charges électrostatiques extérieures par la connection du câble flexible de tête sur la carte Lecture/Ecriture. Lorsque l'on déconnecte ce câble, placer impérativement la platine sur un établi pour lequel on aura pris les mesures requises de décharge électrostatiques, l'opérateur devant porter l'équipement approprié (bracelet d'écoulement des charges électrostatiques)> De plus monter toujours le clip de court-circuit sur le câble flexible démonté.

Les têtes sont également sensibles à un champ magnétique extérieur puissant et la sortie analogique peut en être affectée.

NE PAS UTILISER DE DEMAGETISEUR DE TÊTES - DE TOURNEVIS MAGNETIQUE OU DE CASSETTE DE DEMAGNETISATION.

I

MANEGGIAMENTO DELL TESTINA DCC

ATTENZIONE: le testine sono suscettibili a cariche elettrostatiche con tensioni maggiori di 150V DC. Le testine sono protette dall'influenza di cariche elettrostatiche esterne dovute al collegamento del cavetto flessibile dalla testina alla basetta di lettura e scrittura (read/write board). Quando viene scollegato il cavetto, il deck deve sempre essere riposto sul banco di lavoro , che deve essere necessariamente provvisto delle necessarie protezioni antistatiche (ad esempio tappetino collegato a massa) e il tecnico addetto alla riparazione dovrà trovarsi necessariamente allo stesso potenziale.

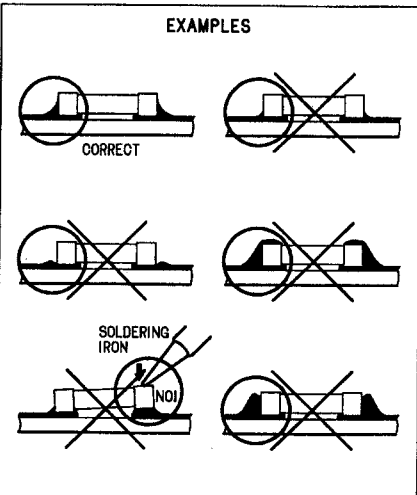
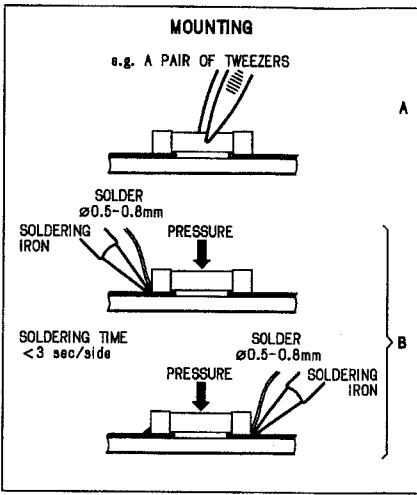
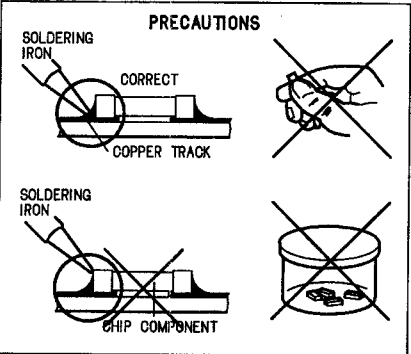
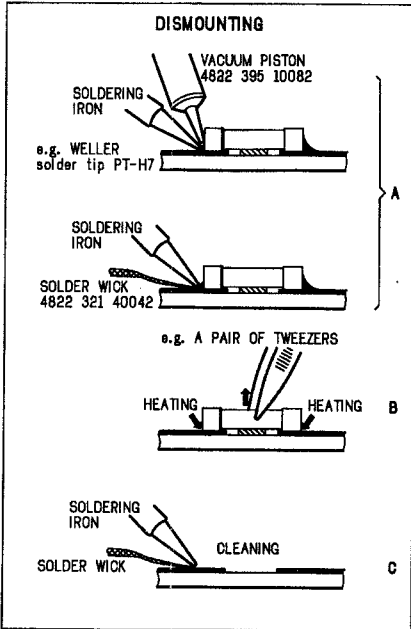
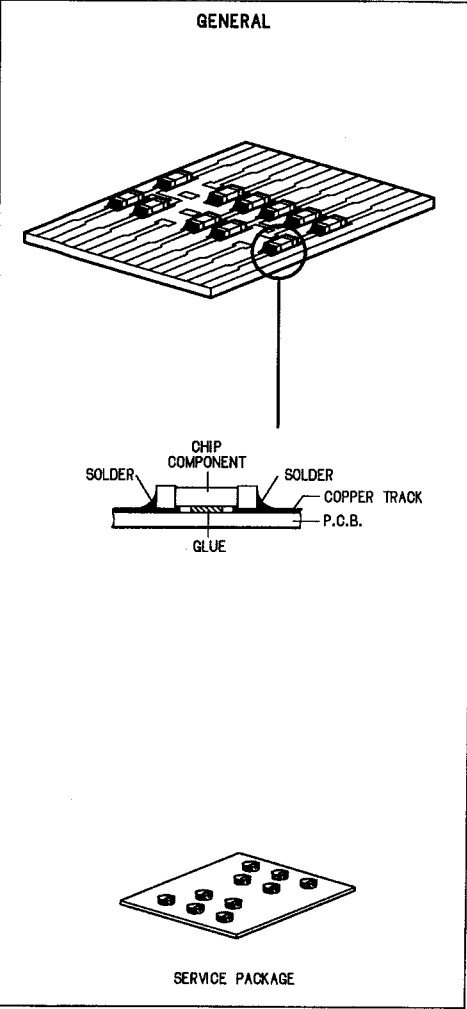
Dopodiché è necessario posizionare la clip (graffetta) in modo da cortocircuitare il cavetto rimosso.

Le testine sono suscettibili anche alla presenza di forti campi magnetici esterni e l'uscita analogica potrebbe risentirne particolarmente.

NON UTILIZZARE TESTINE SMAGNETIZZATRICI , CACCIATIVI MAGNETIZZATI O CASSETTE SMAGNETIZZATRICI.

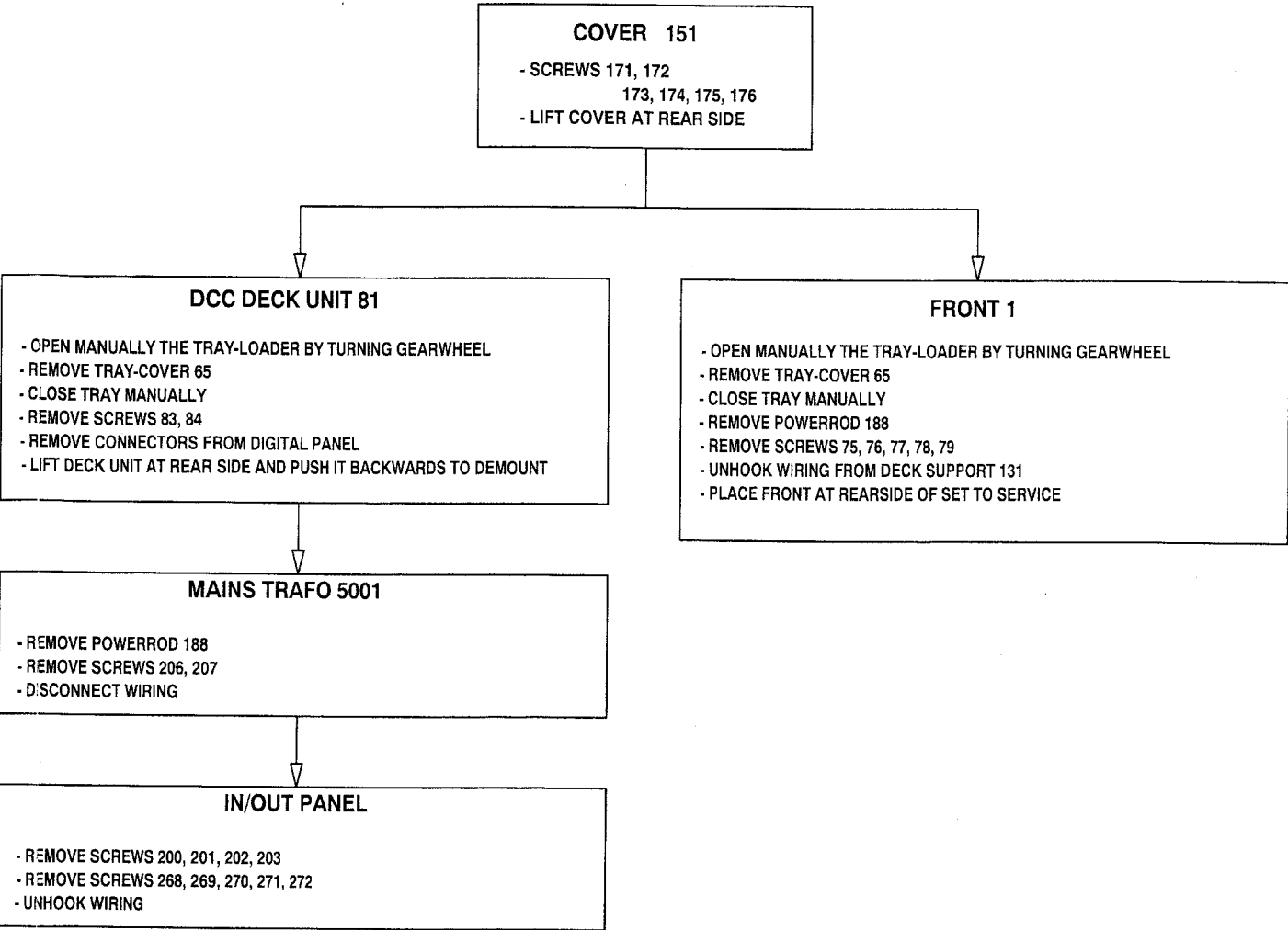
HANDLING CHIP COMPONENTS

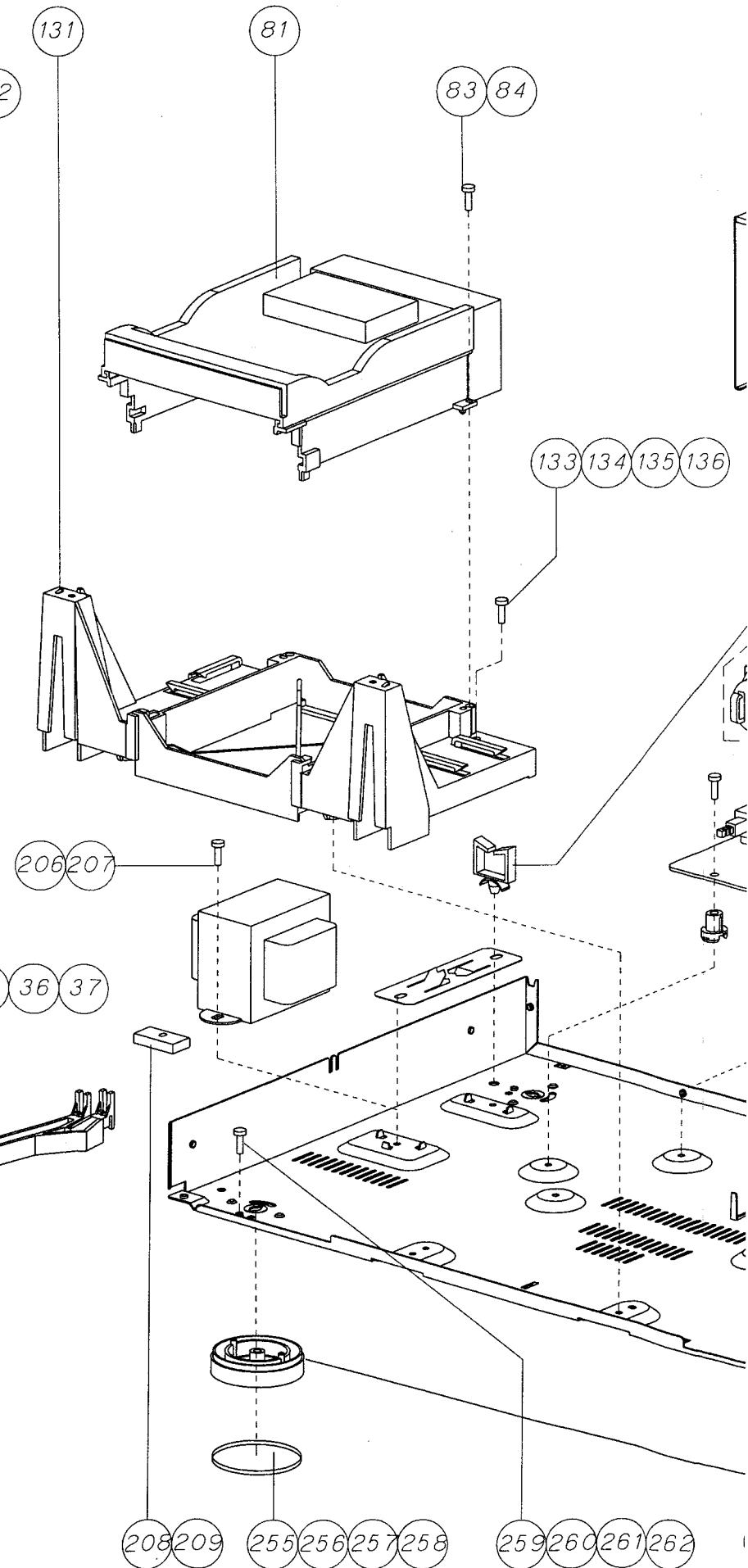
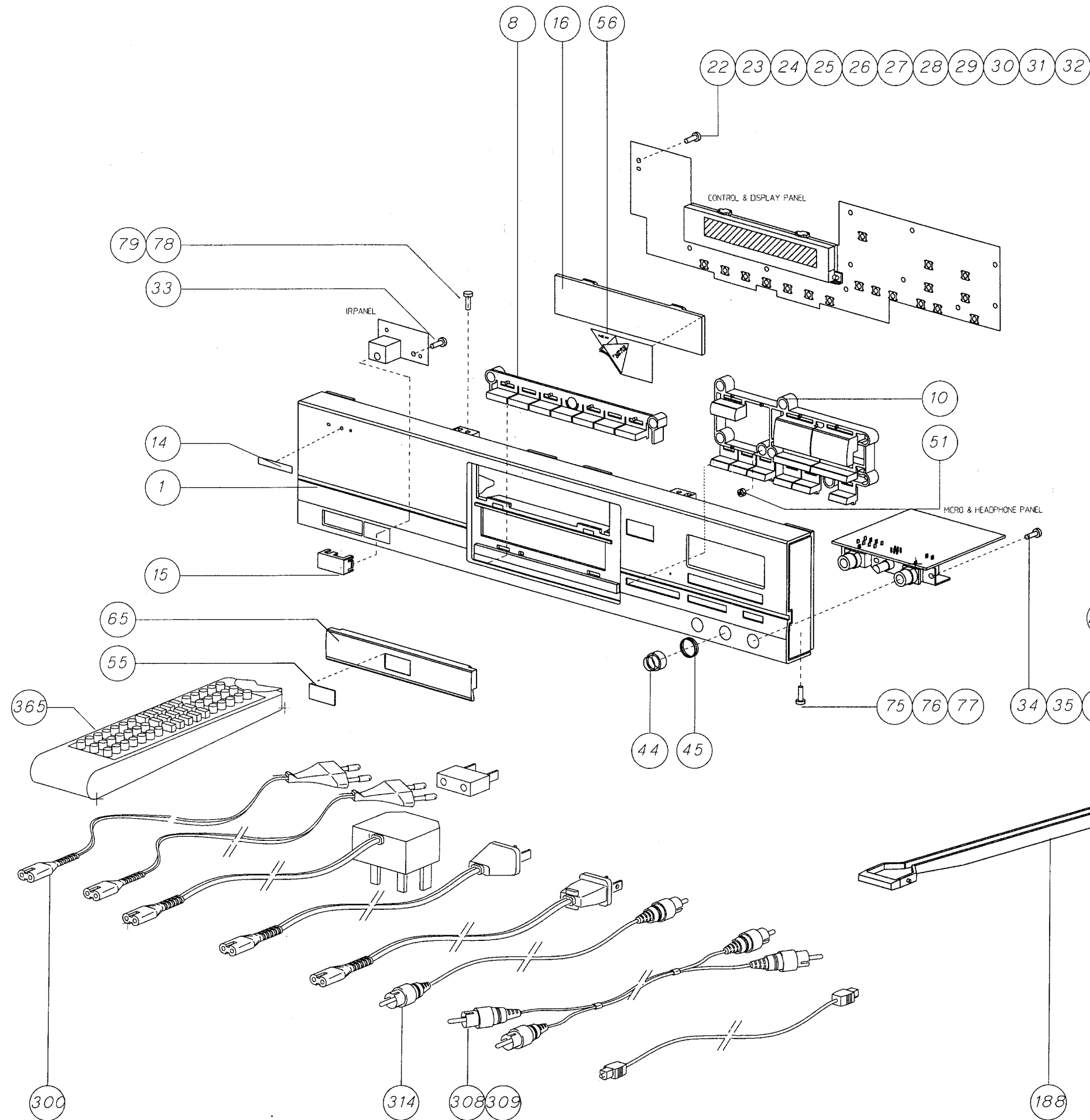
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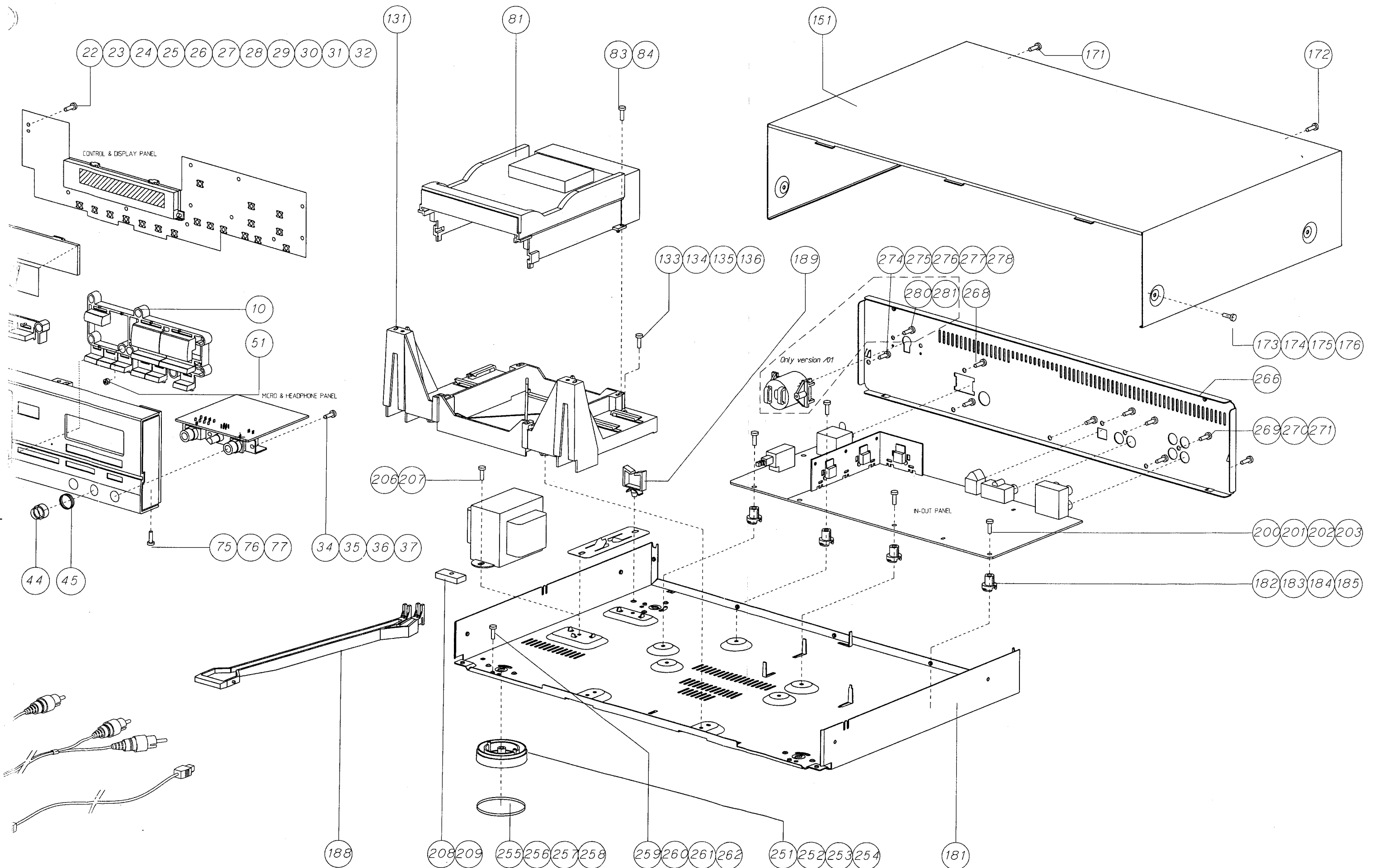


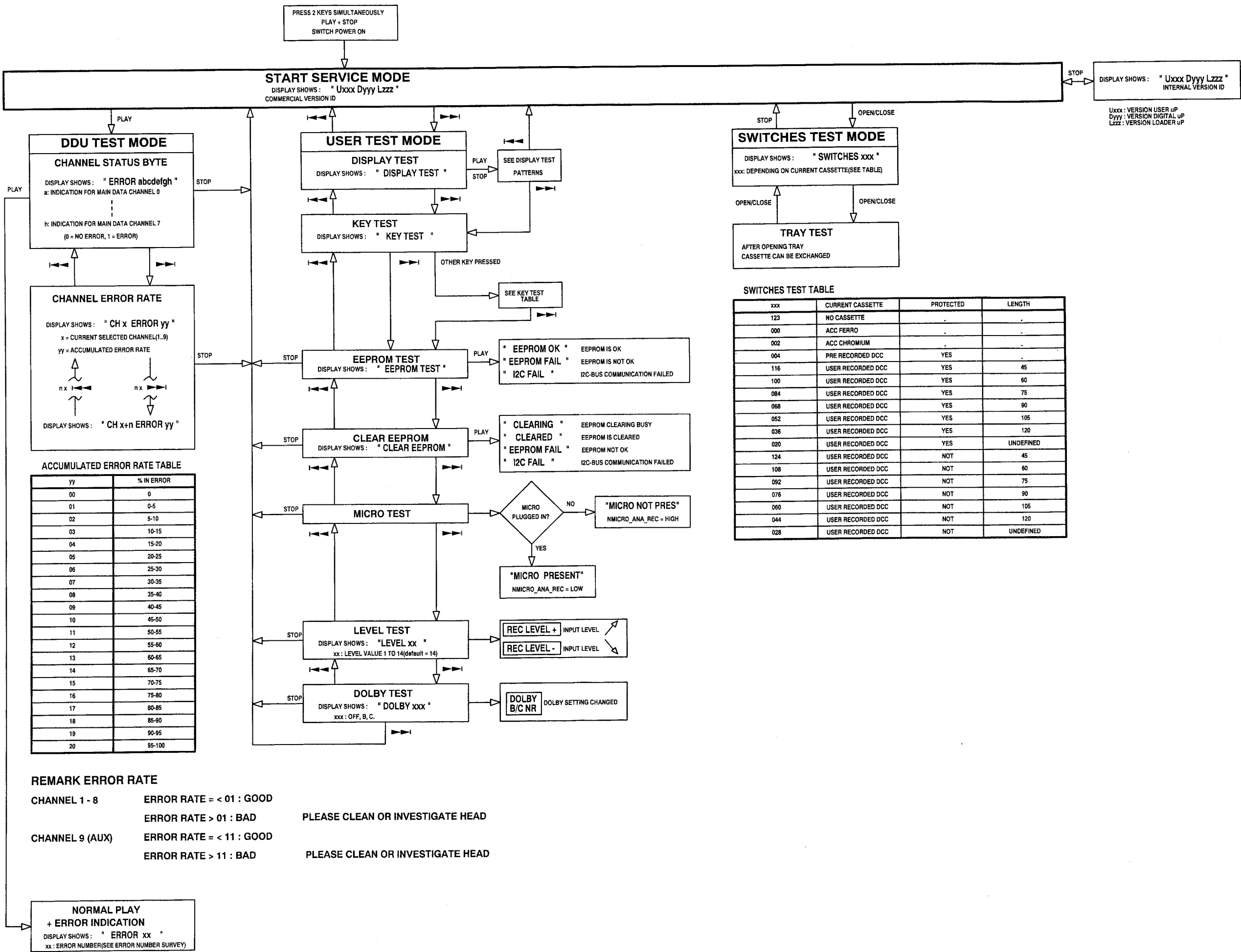
DISASSEMBLY INSTRUCTIONS

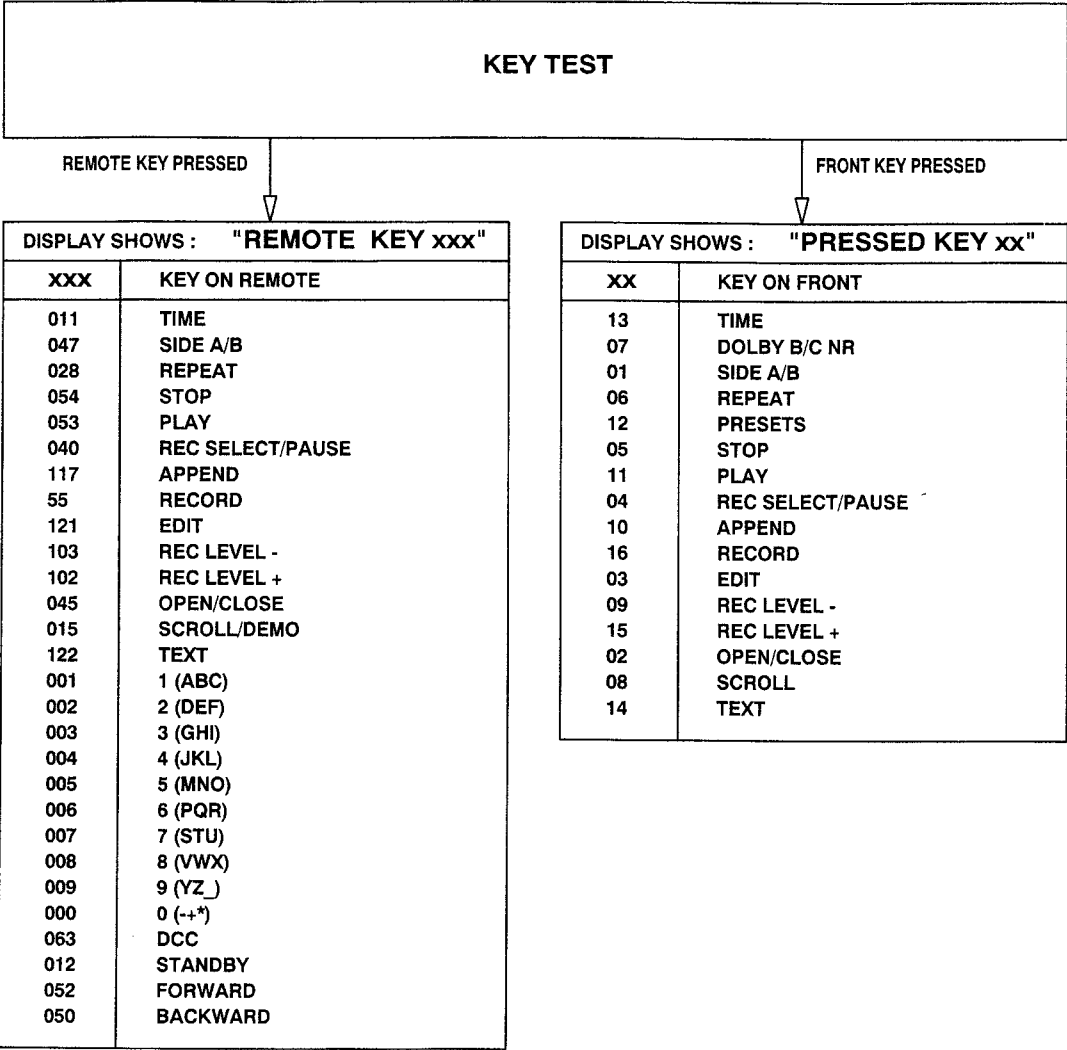
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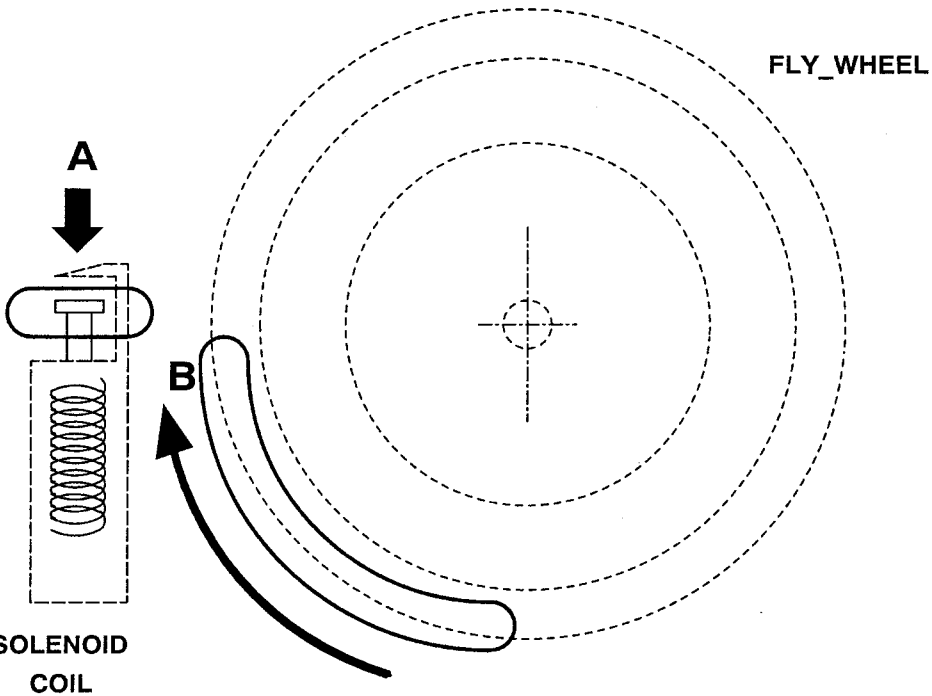
4-4



ERROR NUMBER SURVEY

- | | |
|---|--|
| <p>00 : No error</p> <p>01 : Deck failed
The requested command could not be executed because of a malfunctioning of the mechanics.</p> <p>02 : Tray blocked
This error is issued when the tray has been blocked, although the tray might be moving out again due to this fact. The blocked indication will hence occur very short in the tray status message and could be missed.</p> <p>03 : Tray pulled open
During normal operation the tape drive module has sensed that the tray loader is forced to the open state by the user.</p> <p>04 : Invalid parameter
The parameter going with the last received command is unknown or out of range.</p> <p>05 : No cassette
The command can not be executed since there is no cassette loaded.</p> <p>06 : Digital Audio input out of lock or missing carrier
During recording from a digital input, no input signal is detected. When continuing the recording, undefined data will be recorded which may lead to unpredictable audio during playback. The DDU module will refuse to continue the recording.</p> <p>07 : Digital Audio input has Professional class (unsupported)
During recording from a digital input, a professional source may be detected which is not supported by the DDU module, hence the module will refuse to record from this source.</p> <p>08 : Digital Audio input has non-audio format
During recording from a digital input, the input data may contain computer data instead of audio. The DDU module will refuse to continue the recording.</p> <p>09 : Copy right protection violation (SCMS)
During recording from a digital input, which contains user audio data but which is copyright protected, the DDU module will refuse to continue the recording.</p> | <p>10 : Internal DCC chip error
There has an error occurred within the DCC chips on the DDU digital module. When this error persists over a longer period of time, please consult your nearest service officer.</p> <p>11 : Record attempted on write protected tape
A record or auxiliary record or record-pause command is issued while the loaded cassette is write protected or is an ACC. The DDU module will refuse to record on such a tape.</p> <p>12 : Non existent search target
The target to search for does not exist on the currently loaded cassette. e.g. search for track number 20 while the tape only contains 12 tracks.</p> <p>13 : Invalid command received
The command which was received is not allowed in this context.</p> <p>14 : Setting not allowed
This error message will be returned when the DDU module is performing a TOC search and a next_previous_count is downloaded.</p> <p>15 : Command overrun
The DDU module has received too many state changing commands in a row to handle. This error occurs whenever a command is received while another command is still waiting for execution. The DDU module will not store a queue of received commands.</p> <p>16 : Signature not yet loaded
The record command will only be accepted by the DDU module after the setmakers signature has been loaded. This will make it possible to identify the recording set of each DCC cassette.</p> <p>17 : Unreliable TOC
During the process of TOC search the DDU module found out that the contents of the TOC does not match the contents of the tape. The search command should be repeated using relative search.</p> <p>18 : Search target could not be found
The requested search target was valid but could not be found, e.g. a direct track search after track number 5 on a super-user tape while track number 5 was removed by after-recording, or an append search on a full tape.</p> <p>19 : Marker writing not allowed
A request for a marker can be rejected because of the fact that the last recorded marker is not yet 8 tape frames past or a marker is currently being written or the tape is write protected. Also when the requested marker is out of context (lead_in A on side B or reverse marker on side B this error occurs.</p> <p>20 : Not Used.</p> <p>21 : No track numbers on this tape
Attempt to do a track search on a tape with no track numbers, e.g. search track number 10 on a non-super user tape. Note that a search for track number 1 will always be honoured.</p> <p>22 : No proper super-user tape
The renumber function could not detect a marker on this super user tape or the renumber function was called on a user tape.</p> <p>23 : No TOC available
A direct access search has been requested on a super-user tape which does not have a valid TOC. This search requests can not be honoured.</p> <p>24 : Sector not allowed
Not allowed to change sector in this mode or a sector is requested which is not on the tape, e.g. sector D on a 2-sector tape.</p> <p>25 : No user characters loaded
An attempt to record user characters while these are not yet loaded.</p> <p>26 : Clean head
The reproduction of the audio is bad due to dirt on the head. The user should clean it.</p> <p>27 : Marker may not be removed
Attempt to erase a temporary reverse marker or the first start marker on the tape.</p> <p>28 : No search from virgin
A search action can not start from a virgin tape position.</p> <p>29 : Tape drive does not respond
This error occurs when the digital module can not communicate with the tape drive module.</p> <p>30 : Tape fault on tape broken/blocked.</p> <p>31 : Power down detected by tape drive module.</p> |
|---|--|

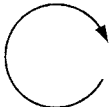
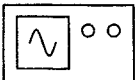
BOTTOM PLATE



IN CASE OF TAPE SALAD THE TAPE DECK RISKS TO BE BLOCKED IN THE PLAY POSITION.
TO UNBLOCK THE DECK OUT OFF THE PLAY POSITION, THE FOLLOWING INSTRUCTIONS HAVE TO BE CARRIED OUT:

1. DISCONNECT THE SET FROM THE MAINS.
2. REMOVE COVER ITEM 151
3. IN THE BOTTOM PLATE OF THE SET ARE 2 HOLES A AND B TO MANIPULATE THE DECK MECHANISM.
4. VIA HOLE A, PUSH THE SHAFT OF THE SOLENOID INWARDS TO LOCK IN THE DECK MECHANISM.
5. VIA HOLE B, TURN FLY-WHEEL IN CLOCKWISE DIRECTION UNTIL THE HEAD PLATE HAS BEEN RETURNED TO THE STOP POSITION.

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9424

TOOLS	REMARKS				
DOLBY LEVEL					
USE DOLBY REF. CASSETTE MTT-150 4822 397 30271 OR TCC-130 4822 397 30269	DOLBY REFERENCE LEVEL 200nWb/m DOLBY OFF	ANALOG OUT SOCKET 1005 PIN 2 (LEFT) PIN 3 (RIGHT)	ON DISPLAY PANEL R3199 (LEFT) R3198 (RIGHT)	ADJUST BOTH CHANNELS TO 500 mVrms +/- 2 dB	CONTROLE: +/- 1.5 Vpp 0.5 mS/DIV

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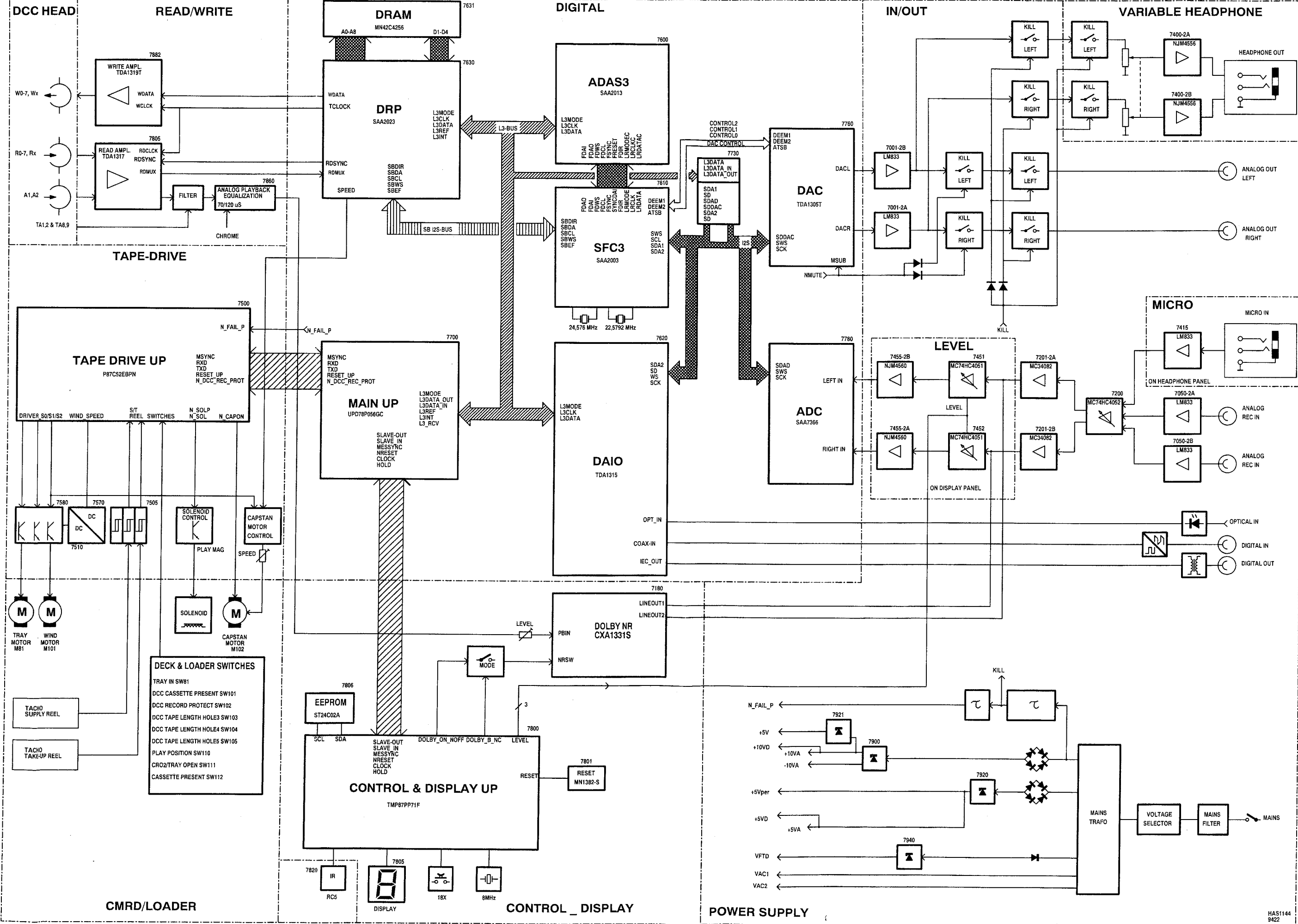
SERVICE TOOLS

Dolby reference cassette MTT-150	4822 397 30271
Universal analog test cassette Fe "SBC420"	4822 397 30071
General purpose test cassette (prerecorded DCC)	4822 397 30256
9.6kHz calibration cassette (prerecorded DCC)	4822 397 30264
Mirror test cassette MC-112C	4822 395 30288
DCC head cleaner cassette (SBC 3500)	4822 015 20646
Ceramic screwdriver D281 1.7	4822 395 50451
TORX screwdriver set "SBC 163"	4822 395 50145
Wheel loosener	4822 395 60039
Trimming kit "SBC317"	4822 310 50095

BLOCK DIAGRAM

5-1

5-1



ABBREVIATIONS

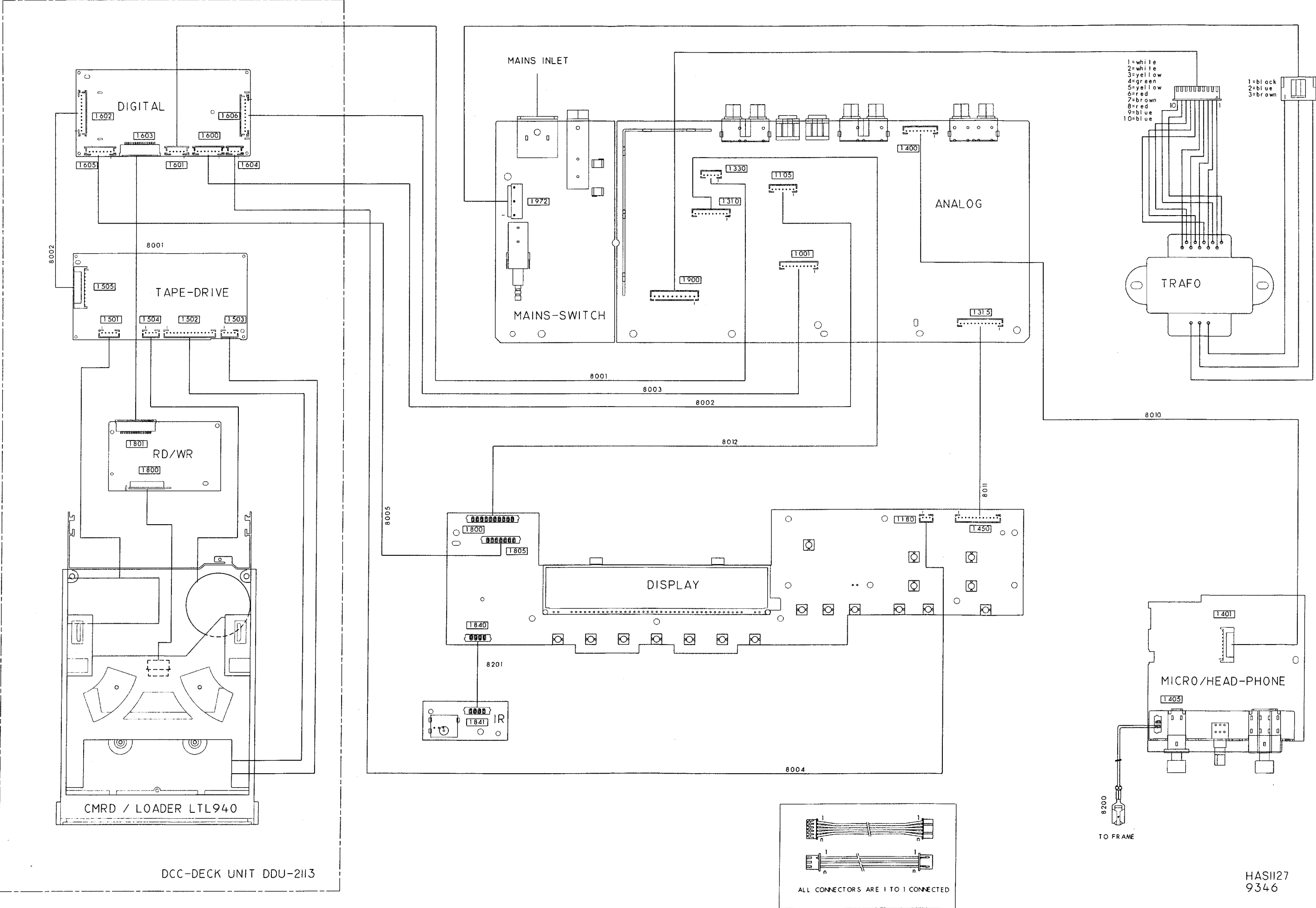
A0	Address SRAM; Address DRAM		
A1	Address SRAM; Address DRAM		
A1 0/RAS	Address SRAM; RAS DRAM		
A1 1	Address SRAM		
A1 2/PinO5	Address SRAM; Address DRAM; Port expander output 5		
A1 3/PinO2	Address SRAM; Address DRAM; Port expander output 2		
A1 4/PinO1	Address SRAM; Address DRAM; Port expander output 1		
A1 5/PinO4	Address SRAM; Address DRAM; Port expander output 4		
A1 6/PinO3	Address SRAM; Address DRAM; Port expander output 3		
A2	Address SRAM; Address DRAM		
A3	Address SRAM; Address DRAM		
A4	Address SRAM; Address DRAM		
A5	Address SRAM; Address DRAM		
A6	Address SRAM; Address DRAM		
A7	Address SRAM; Address DRAM		
A8	Address SRAM; Address DRAM		
A9/CAS	Address SRAM; CAS for DRAM		
A1+	Analog reader ACC Left channel		
A2+	Analog reader ACC Right channel-		
ACC/NDCC	Analog or DCC playback		
ANAEYE	Analogue eye pattern output		
ANAL	ACC output Left		
ANAR	ACC output Right		
ATSB	12 dB attenuation(active LOW)		
ATTDAC	DAC attenuation control.		
AZCHK	channel 0 and channel 7 azimuth monitor.		
BCK	bit clock input.		
BIAS	Bias current for ADC		
BIL	buffer op-amp inverting input for left channel.		
BIR	buffer op-amp inverting input for right channel.		
BOL	buffer op-amp inverting input for left channel.		
BOR	buffer op-amp output for right channel.		
CAP_A	Capstan motor control connection A		
CAP_B	Capstan motor control connection B		
CAPSTAN	Low output level switches the capstan motor on.		
CAPSTAN+	Capstan motor + connection		
CAPSTAN-	Capstan motor - connection		
CEDC	system clock output.		
CHMODE	use of channel status(0=professional use, 1=consumer use)		
CHROME	Indication if a chrome analog cassette is inserted.		
CHTST1	Channel test pin 1		
CHTST2	Channel test pin 2		
CKIN	system clock input.		
CKSL1	clock selection 1		
CKSL2	clock selection 2		
CLAMP	Write current output		
CLK22	22.5792 MHz buffered clock output of SFC3.		
CLK24	24.576 MHz XTAL buffered clock output of SFC3.		
CLKSEL	select system clock		
CLOCK	Serial data clock from controller		
CLOSE_TRAY	Tray motor connection		
			(+10V = Open tray; 0V = Close tray)
		COA	Common analog
		COAXIAL IN	IEC958 high sensitive input
		COD	Common digital
		COPY	copyright status bit
		CRO2/TRAY_OPEN	CRO2/FE cassette detection switch input
			if N_CASS_PRES = L
			L = FE; H = CRO2
			if N_CASS_PRES = H
			L = tray fully opened,
			H = tray is not fully opened
		CTRLMODE	select μ P/stand-alone mode
		D0	Data SRAM; Data DRAM
		D1	Data SRAM; Data DRAM
		D2	Data SRAM; Data DRAM
		D3	Data SRAM; Data DRAM
		D4	Data SRAM;
		D5	Data SRAM;
		D6	Data SRAM;
		D7	Data SRAM;
		DACL	Analog audio output left
		DACR	Analog audio output right
		DATA	data input
		DCC_CASS_PRES	DCC cassette present switch input
		DEEM	pre-emphasis output bit
		DEEM1	deemphasis on/off
		DEEM2	deemphasis on/off
		DEEMDAC	DAC control output.
		DIGITAL OUT	IEC958 output
		DSMB	double speed mode(active LOW).
		ERCOSTAT	ERCO status, for test only
		FDAI	filtered serial data input(from ADAS)
		FDAO	filtered serial data output(to ADAS)
		FDCL	filtered data bit clock
		FDIR	PASC mode encode/decode
		FDWS	filtered data word select
		FILTCL	capacitor for left channel 1st order filter function.
		FILTCR	capacitor for right channel 1st order filter function.
		FRESET	reset signal from codec.
		FS256	master audio clock at 256x sample frequency
		FS32	indicates sample frequency=32kHz
		FS44	indicates sample frequency=44kHz
		FS48	indicates sample frequency=48kHz
		FSYNC	subband synchronisation on F-I ² S bus.
		GNDA	Analog ground
		GNDD	Digital ground
		GNDS	Analog motors ground
		HOLD	DDU is busy flag
		HPEN	high pass filter enable input.
		I ² SOUTEN	serial audio output enable.
		I ² SSEL	select auxiliary input or normal input in transmit mode.
		IECIN0	TTL level IEC input.
		IECIN1	high sensitivity IEC input.
		IECO	digital audio output for optical and transformer link.
		IECOEN	digital audio output enable
		IECOP	IEC958 digital audio output.
		IECSEL	select IEC input 0 or 1
		IN0-7	Head signals of main data channels
		INAUX	Head signal of auxiliary data.

INL	Analog input signals from DCC head.	PINO1	Port expander output 1	STROBE	strobe for control register(active high)
INMFL	Magnetic feedback amplifier input left.	PinO2/SPEEDB	Port expander output 2/ PWM	SUBSTR	Substrate connection
INMFR	Magnetic feedback amplifier input right.	PLAY MAG	capstan control output for deck B	SWS	serial interface word select signal.
INR	Analog input signals from DCC head.		Connection to the solenoid on the DDU deck.	SYNCDAI	settings synchronisation for DAIO
INVALID	validity of audio sample input/output	POR	Power On Reset	SYSCCLKI	system clock input
IREF	current reference node.	PRGSTAT	TFE3 program status, for test only	SYSCCLKO	system clock output
L3CLK	L3 bus clock line	PWRDWN	enable power-down input in the standby mode	TA1	Feedback conductor ACC Left channel
L3CLKC	codec interface clock		Put DRP into power down mode	TA2	Feedback conductor ACC Left channel
L3CLKM	microcontroller interface clock		Signal for write heads.	TA8	Feedback conductor ACC Right channel
L3DATA	L3 bus serial data line	QA-QJ	Quick reverse input signal	TA9	Feedback conductor ACC Right channel
L3DATAC	codec interface data	QUICK_REVERSE	Digital reader CH0(Hot)	TCLOCK	3.072 MHz clock output for tape I/O
L3DATAM	microcontroller interface data	R0+	Digital reader CH1(Hot)	TD1	Test conductor digital
L3INT	L3 interrupt output	R1+	Digital reader CH2(Hot)	TD2	Test conductor digital
L3MODE	Mode line for L3 interface	R2+	Digital reader CH3(Hot)	TEST0	test mode select
L3MODEC	codec interface mode	R3+	Digital reader CH4(Hot)	TEST1	test mode select
L3MODEM	microcontroller interface mode	R4+	Digital reader CH5(Hot)	TEST2	Test mode select
L3REF	L3 bus timing reference	R5+	Digital reader CH6(Hot)	TREEL	Tacho Take-up reel
LADDR	microprocessor interface address switch input	R6+	Digital reader CH7(Hot)	TXD	Serial data output to tape drive unit
LCLK	microprocessor interface clock line input	R7+	pin for PLL loop filter	UDAVAIL	synchronisation for output user data(0=data available, 1=no data)
LDATA	microprocessor interface data line input/output	RCfil	pin for integrating capacitor	UNLOCK	PLL out-of-lock(0=not locked, 1=locked)
LEFT INPUT	Analog audio input left	RCint	Analogue multiplexed input from READ AMPLIFIER	URDA	unreliable data from drive processing
LMODE	microprocessor interface mode line input	RDMUX	Synchronisation output for READ AMPLIFIER	VDACN	negative 1 bit DAC reference voltage input.(connected 0V)
LOWPOWER	Low power playback reset	RDSYNC	Reset signal from Digital Unit controller	VDACP	positive 1 bit DAC reference voltage input.(connected 5V)
LTCNT0	LT compatible interface mode control	RESET	Reset tape drive module µP	VOL	left channel output.
LTCNT0C	SAA2002 SFC interface mode control	RESET_UP	resolution selection 0	VOR	right channel output.
LTCNT1	LT compatible interface mode control	RESOL0	resolution selection 1	W01	Digital writer(CH0/CH1)
LTCNT1C	SAA2002 SFC interface mode control	RESOL1	Analog audio input right	W12	Digital writer(CH1/CH2)
M0	(test mode input) connect to VDD	RIGHT INPUT	Digital reader AUX channel(Hot)	W23	Digital writer(CH2/CH3)
M1	(test mode input) connect to VDD	RX+	Serial data input from tape drive unit	W34	Digital writer(CH3/CH4)
MCLK	6.144 MHz clock output	RXD	Bit clock for sub-band I2S interface.	W45	Digital writer(CH4/CH5)
MESSYNC	Message synchronisation with controller	SBCL	sub-band bit clock	W56	Digital writer(CH5/CH6)
MLE	Latch enable signal for digital filter	SBDA	Data line for sub-band I2S interface	W67	Digital writer(CH6/CH7)
MSYNC	Message synchronisation with Digital µP	SBDIR	DRP	W7-	Digital writer(CH7)
MUSB	muting(active LOW)	SBEF	Direction line for sub-band I2S interface DRP	WDATA	Serial output to WRITE AMPLIFIER
MUTE	audio mute input	SBEF	Sub-band I2S error flag line	WEN	Write enable for RAM
MUTEDAC	DAC control or general purpose output	SBMCLK	Master clock for sub-band I2S interface DRP	WIND+	Reel motor + connection
N_CASS_PRESENT	Cassette present switch input	SBWS	Word selector for sub-band I2S interface DRP.	WIND-	Reel motor - connection
N_DCC_REC_PROT	DCC record protect switch input	SCK	I2S bus clock line	WRITE-STDBY	Write amplifier stand-by
N_FAILP	Power fail(L = power failure)	SCL	baseband bit clock	WS	word select input/output, I ² S-bus
N_FLAP_PRESENT	Flap loader present indication	SD	serial audio data input/output; I ² S-bus	WX-	Digital writer(AUX channel)
N_HOLE3	DCC tape length indication switch input	SDA1	baseband serial data to/from DAIO and ADC	WX0	Digital writer(AUX channel/CH0)
N_HOLE4	DCC tape length indication switch input	SDA2	baseband serial data output to DAC	X22IN	22.5792 MHz XTAL oscillator input
N_HOLE5	DCC tape length indication switch input	SDAD	Serial data from AD-converter	X22OUT	22.5792 MHz XTAL oscillator output
N_PLAY_POS	Indication if head is in play position	SDAUX	auxiliary serial data input; I ² S-bus	X24IN	24.576 MHz XTAL oscillator input
N_QREV_PRESENT	Quick reverse sensor present	SDDAC	I2S bus data line for DAC	X24OUT	24.576 MHz XTAL oscillator output
N_TRAY_IN	Tray switch input	SDO	serial interface data output.	X256	master audio clock input from external source
NC	not connected	SFC3COMP	SFC3(SAA2003) compatibility mode	Xin	system clock input
N_DDC_REC_PROT	DCC record protection switch input	SFOR	input for selecting serial interface output format.		
N_MUTE	Mute for audio channels(active low)	SHIELD	Shield connection		
NODONE	No done state selection	SLAVE	input for selecting serial interface operating mode MASTER/SLAVE.		
N_RESET	Master reset Digital Unit	SLAVE_IN	Serial data from controller		
OEN	Output Enable for RAM	SLAVE_OUT	Serial data to controller		
OPEN_TRAY	Tray motor connection(+10V = Close tray; 0V = Open tray)	SPEED	PWM capstan control output for deck		
OPTICAL IN	IEC958 input from optical receiver	SREEL	Tacho Sypply reel		
OUTAUX	Parallel output of read IC.	STANDBY	device inactive		
OVL	overload indication output.	STD	input for selecting STANDBY mode.		

WIRING DIAGRAM

6-1

6-1



PIN DESCRIPTION

6-1

1600-1105

- 1 = GNDD
- 2 = OPTICAL IN
- 3 = GNDD
- 4 = COAXIAL IN
- 5 = +5VD
- 6 = DIGITAL OUT
- 7 = GNDD

1601-1330

- 1 = N_FAILP
- 2 = GNDD
- 3 = +5VD
- 4 = GNDS
- 5 = +10VD

1602-1505

- 1 = MSYNC
- 2 = N_FAILP
- 3 = GNDS
- 4 = +10VD
- 5 = RESET_UP
- 6 = SPEED
- 7 = RXD
- 8 = +5VD
- 9 = TXD
- 10 = NDCC_REC_PROT
- 11 = GNDD

1603-1801

- 1 = GNDD
- 2 = WDATA
- 3 = GNDD
- 4 = CHROME
- 5 = GNDA
- 6 = ANAR
- 7 = GNDA
- 8 = ANAL
- 9 = WRITE_STNDBY
- 10 = ACC/NDCC
- 11 = RDMUX
- 12 = GNDD
- 13 = RDSYNC
- 14 = GNDD
- 15 = TCLOCK
- 16 = GNDD
- 17 = +5VD
- 18 = +10VD

1604-1180

- 1 = ANAL
- 2 = GNDA
- 3 = ANAR

1605-1805

- 1 = SLAVE_OUT
- 2 = GNDD
- 3 = MESSYNC
- 4 = SLAVE_IN
- 5 = NRESET
- 6 = CLOCK
- 7 = HOLD

1606-1001

- 1 = LEFT INPUT
- 2 = GNDA
- 3 = RIGHT INPUT
- 4 = GNDA
- 5 = NMUTE
- 6 = DACR
- 7 = GNDA
- 8 = +5VA
- 9 = GNDA
- 10 = DACL

1501

- 1 = CLOSE_TRAY
- 2 = OPEN_TRAY
- 3 = N_TRAY_IN
- 4 = GNDS
- 5 = N_FLAP_PRESENT

1502

- 1 = TREEL
- 2 = SREEL
- 3 = N_CASS_PRES
- 4 = CRO2/TRAY_OPEN
- 5 = DCC_CAS_PRES
- 6 = N_DCC_REC_PROT
- 7 = N_HOLE3
- 8 = N_HOLE4
- 9 = N_HOLE5
- 10 = N_QREV_PRES
- 11 = QUICK_REVERSE
- 12 = +5VD
- 13 = GNDD
- 14 = N_PLAY_POS

1503

- 1 = WIND-
- 2 = WIND+
- 3 = PLAY_MAG-
- 4 = +10VD

1504

- 1 = CAPSTAN-
- 2 = CAPSTAN+
- 3 = CAP_A
- 4 = CAP_B

1800

- 1 = TXD
- 2 = WX-
- 3 = RX+
- 4 = WX0
- 5 = R0+
- 6 = W01
- 7 = R1+
- 8 = W12
- 9 = R2+
- 10 = W23
- 11 = R3+
- 12 = W34
- 13 = COD
- 14 = W45
- 15 = R4+
- 16 = W56
- 17 = R5+
- 18 = W67
- 19 = R6+
- 20 = W7-
- 21 = R7+
- 22 = TD2
- 23 = TA8
- 24 = A2+
- 25 = TA9
- 26 = TA1
- 27 = A1+
- 28 = COA
- 29 = TA2
- 30 = SHIELD

1310-1800

- 1 = ESI_OUT
- 2 = ESI_IN
- 3 = NDIG_DET
- 4 = OPT_NDIG_SEL
- 5 = NON_OFF_SUPPLY
- 6 = +5VPER
- 7 = GND
- 8 = VFTD
- 9 = VAC2
- 10 = VAC1

1315-1450

- 1 = NHIGH_LOW_REC_LEVEL
- 2 = NMICRO_ANA_REC
- 3 = NMICRO_DET
- 4 = LEFT_OUT
- 5 = GND
- 6 = RIGHT_OUT
- 7 = -10VA
- 8 = GND
- 9 = +10VA
- 10 = LEFT_IN
- 11 = GND
- 12 = RIGHT_IN

1840-1841

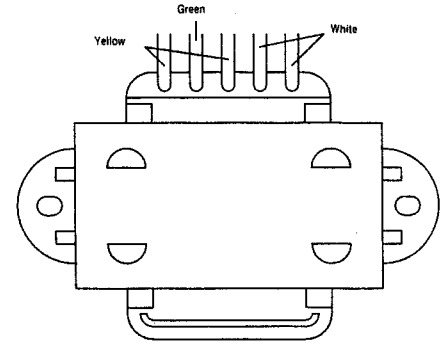
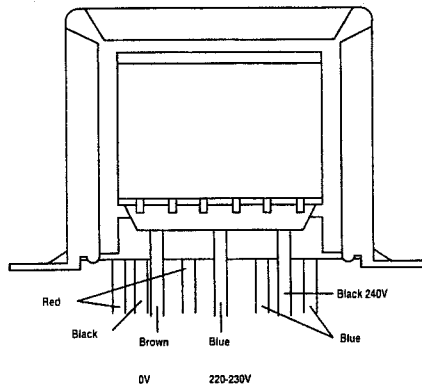
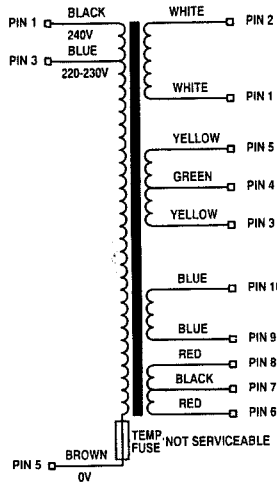
- 1 = +5V
- 2 = GND
- 3 = RC5
- 4 = LED

1400-1401

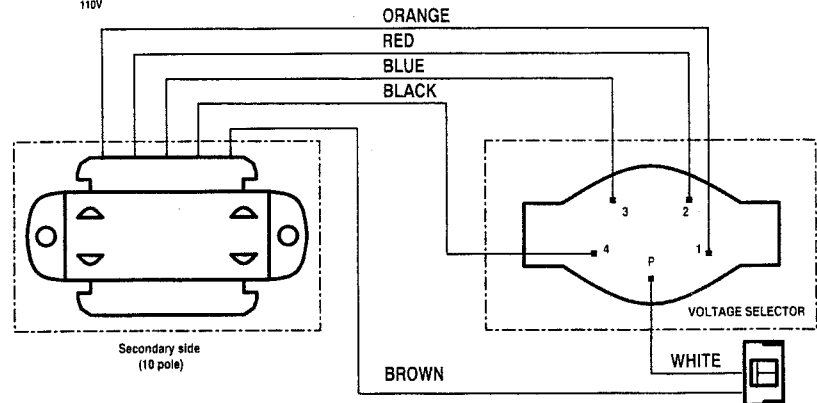
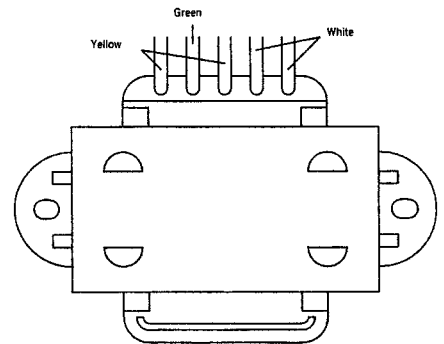
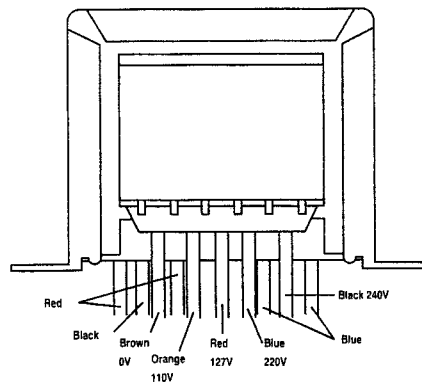
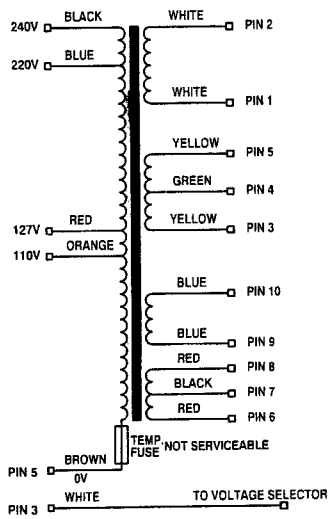
- 1 = MICRO_IN
- 2 = MICRO_DET
- 3 = KILL
- 4 = +10VA
- 5 = GND_PWR
- 6 = -10VA
- 7 = RHP
- 8 = GND_HP
- 9 = LHP

TRANSFORMER CONNECTIONS

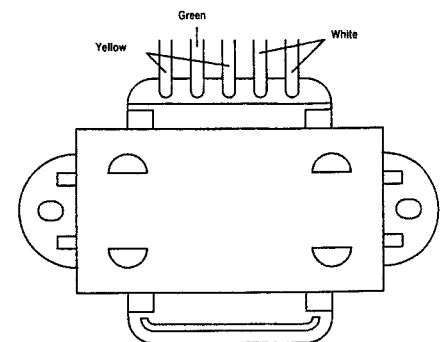
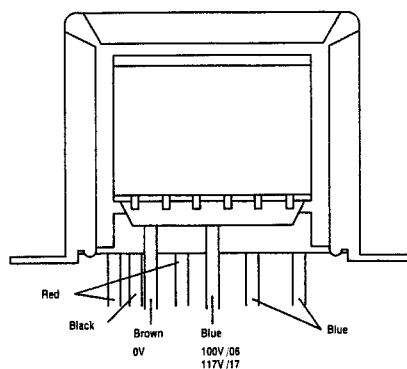
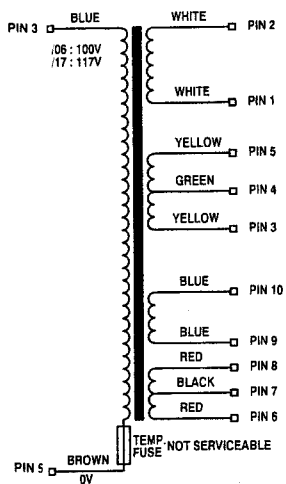
/00/05 VERSIONS



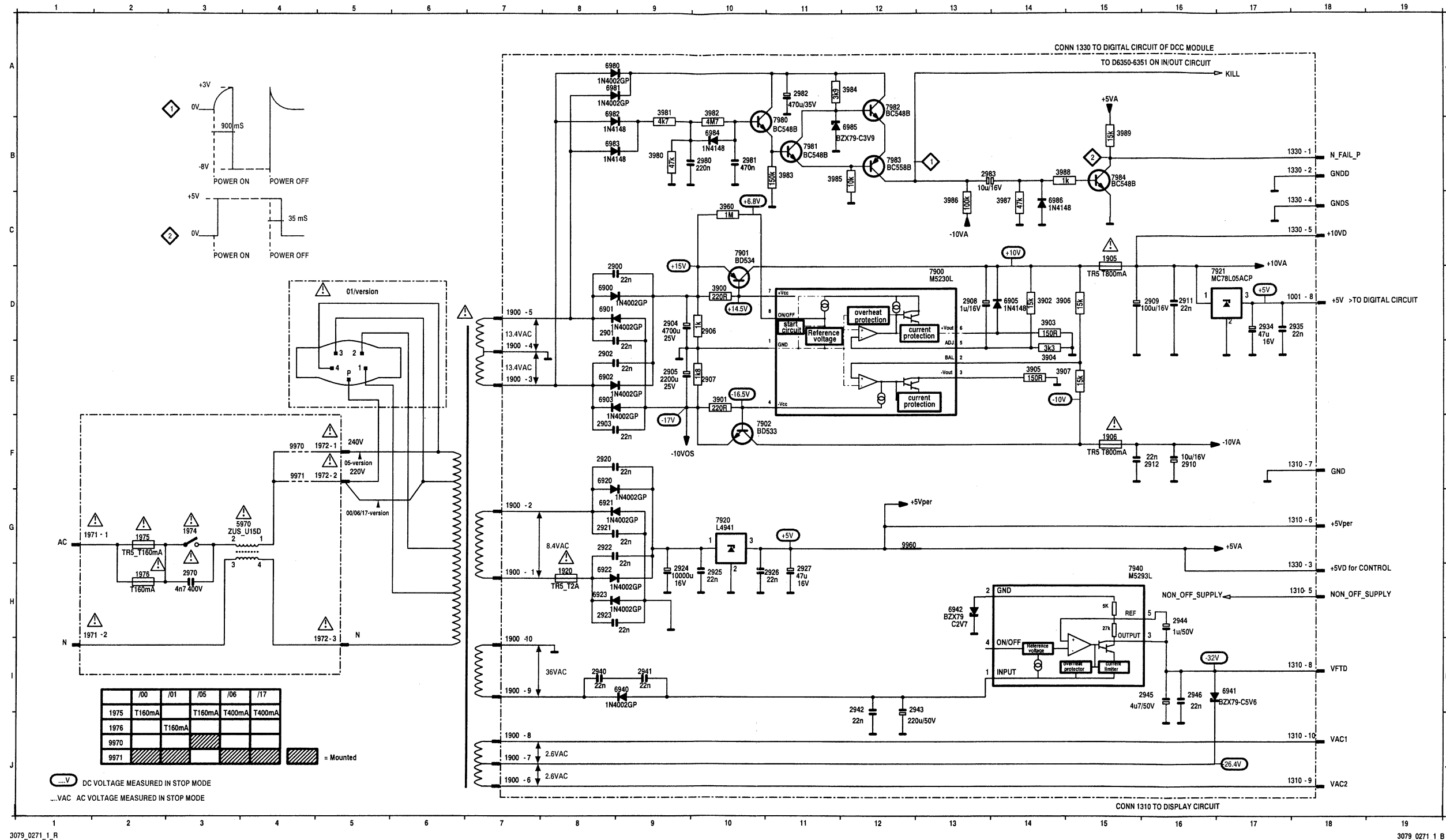
/01 VERSION



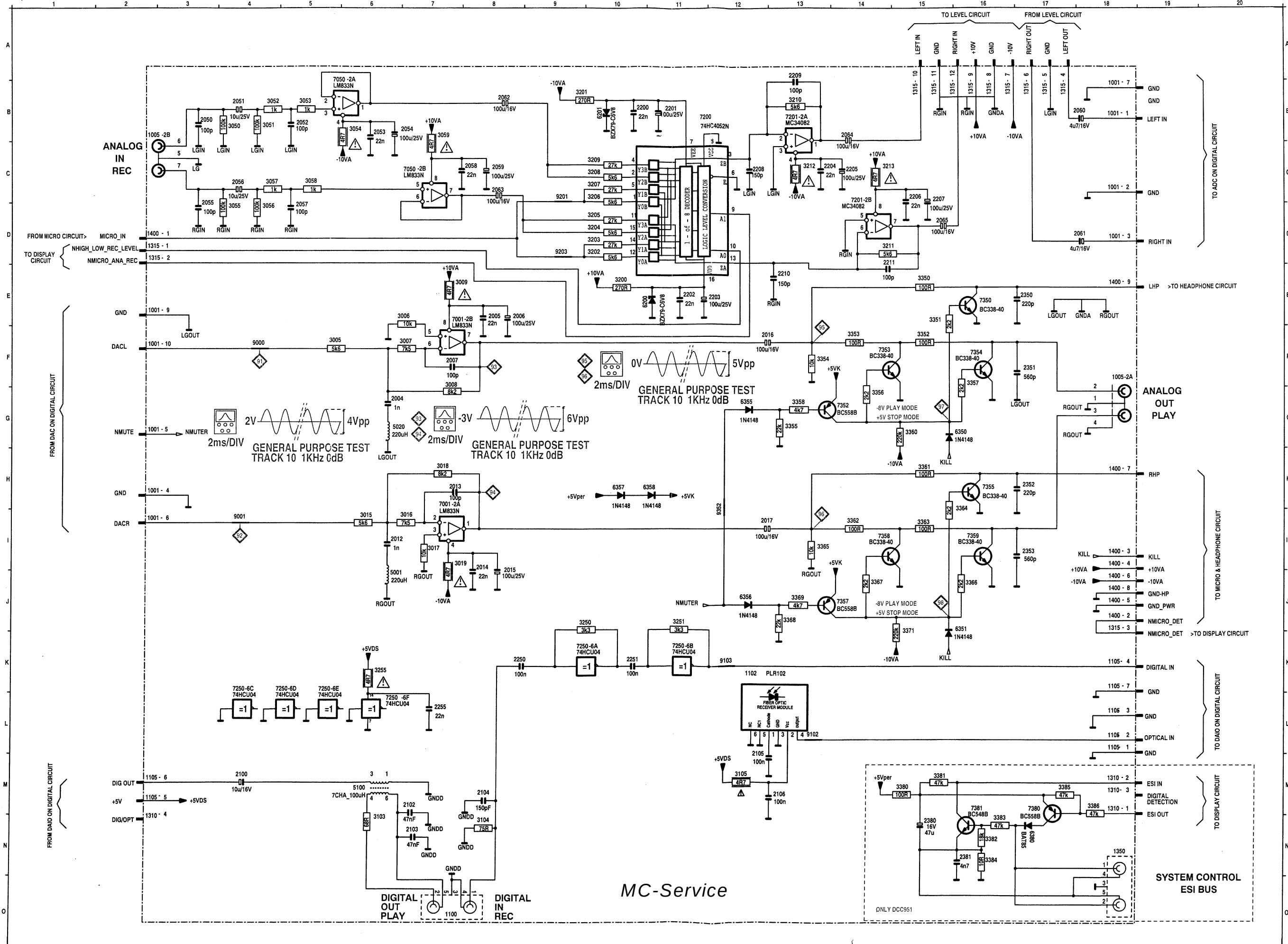
/06/17 VERSIONS



POWER SUPPLY CIRCUIT DIAGRAM



	1001	D17	7982	A12
	1010	D17	7983	B12
	1310	G17	7984	B15
	1310	G17	7985	B15
	1310	H7	9960	G12
	1310	H7	9970	F4
	1310	J17		
A	1330	B17		
	1330	B17		
	1330	H17		
	1330	C17		
	1330	C17		
	1900	H7		
	1900	G7		
	1900	E7		
	1900	E7		
	1900	D7		
	1900	I7		
	1900	J7		
B	1900	J7		
	1905	C15		
	1906	F15		
	1920	H8		
	1971	G2		
	1971	H2		
	1972	F4		
	1972	F4		
	1972	I4		
	1974	G3		
C	1975	F2		
	1976	H2		
	2900	D8		
	2901	D8		
	2902	E8		
	2903	F8		
	2904	D9		
	2905	E9		
	2906	D10		
	2906	D10		
	2908	D13		
	2909	D16		
	2910	F16		
	2911	D16		
	2912	F16		
	2920	F8		
	2921	H8		
	2922	G8		
	2923	H8		
	2924	H9		
	2925	H10		
	2926	H11		
	2927	H11		
	2934	D7		
	2935	D7		
	2940	I8		
	2941	I8		
	2942	I12		
	2943	I13		
	2944	H16		
	2945	H16		
	2946	H16		
	2970	H3		
	2980	B10		
	2981	E10		
	2982	A11		
	2983	B13		
	3500	D10		
	3501	E10		
	3902	D14		
	3903	D14		
	3904	E14		
	3905	D14		
	3906	D14		
	3907	E14		
	3960	C10		
	3980	B9		
	3981	A9		
	3982	D10		
	3983	B11		
	3984	A12		
	3985	B11		
	3986	C13		
	3987	C14		
	3988	B14		
	3989	B15		
	5900	D8		
	5901	G4		
	5902	H8		
	5903	E8		
	5905	D14		
	6920	F8		
	6921	G8		
	6922	H8		
	6923	H8		
	6940	I9		
	6941	I7		
	6942	H13		
	6980	A8		
	6981	A8		
	6982	A8		
	6983	B8		
	6984	B10		
	6985	B12		
	6986	C14		
	7900	D13		
	7901	C10		
	7902	F10		
	7920	C10		
	7921	D16		
	7940	H15		
	7980	B11		
	7981	B11		



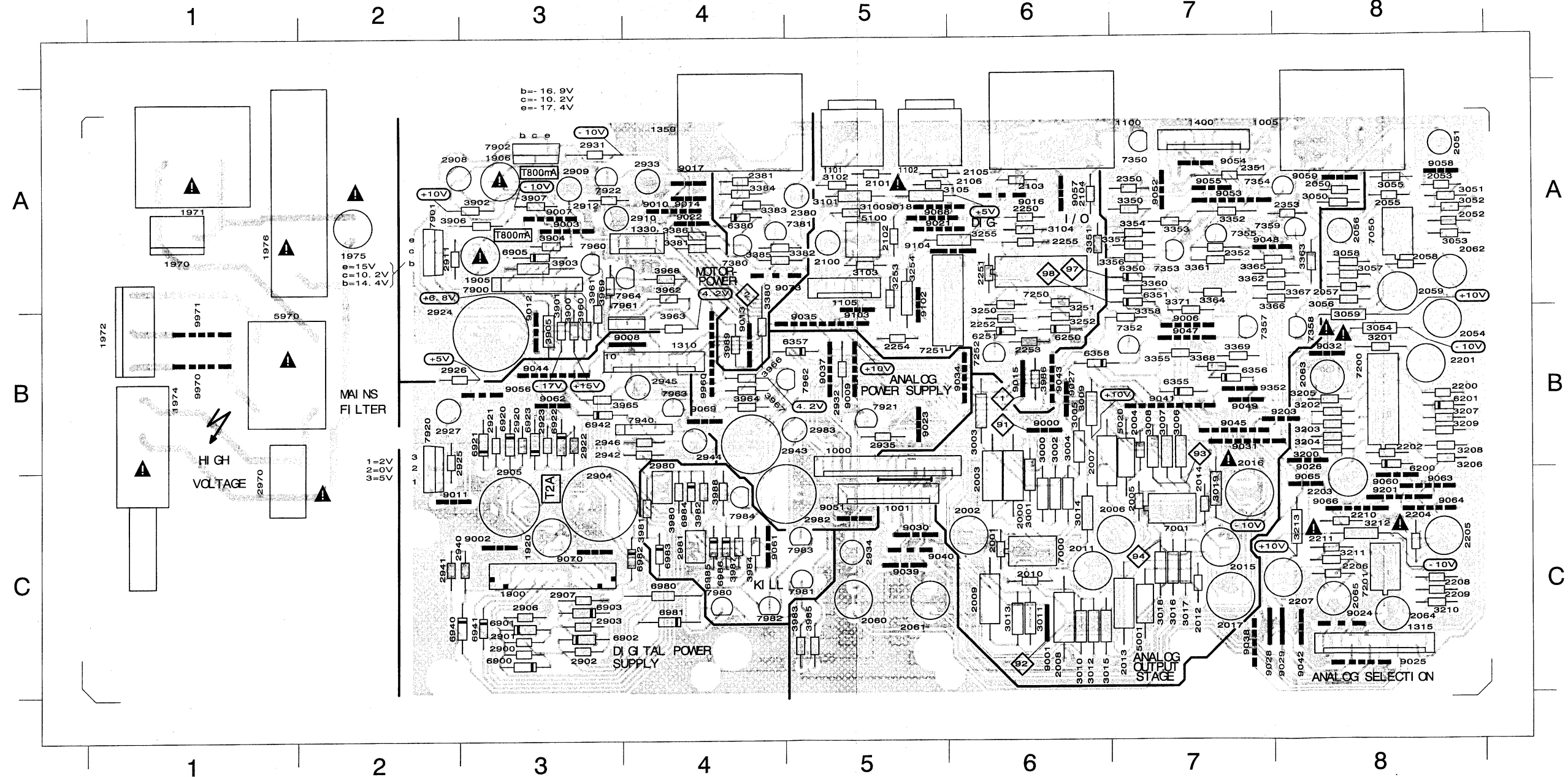
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1001 C18	3385 M17
1001 D18	3386 M18
1001 H3	5001 J6
1001 G3	5020 G6
1001 I3	5100 M6
1001 B18	6200 E10
1001 E3	6201 B10
1001 F3	6350 G16
1005 F18	6351 J16
1005 B3	6355 G12
1100 O7	6356 J12
1102 K12	6357 H10
1105 L18	6358 H11
1105 L18	6380 N17
1105 L18	7001 H7
1105 K18	7001 E7
1105 M3	7050 B5
1105 M3	7050 C7
1105 M3	7201 B13
1310 M18	7201 C14
1310 M18	7250 K9
1310 M3	7250 K11
1315 D3	7250 K4
1315 D3	7250 K4
1315 B17	7250 L6
1315 B17	7350 E16
1315 B17	7352 G14
1315 B17	7353 F14
1315 B17	7354 F16
1315 B17	7355 H16
1315 B17	7357 J14
1315 B17	7358 I14
1315 B17	7359 I16
1350 N18	7380 M17
1400 D3	7381 M16
1400 J18	9000 F4
1400 I18	9001 I4
1400 I18	9102 L13
1400 J18	9103 K12
1400 J18	9201 C9
1400 H18	9203 D9
1400 J18	5352 H12
1400 E18	
2004 G6	
2005 E8	
2006 E8	
2007 F7	
2012 I6	
2012 H7	
2014 I8	
2015 I8	
2016 F12	
2017 I12	
2050 B3	
2051 I4	
2052 B5	
2053 B6	
2054 B3	
2055 B3	
2056 C4	
2057 D5	
2058 C8	
2059 C8	
2060 B17	
2061 D17	
2062 B8	
2063 C8	
2064 B14	
2065 D15	
2100 M4	
2102 M7	
2103 N7	
2104 M8	
2105 M12	
2106 M13	
2200 E10	
2201 B11	
2202 E11	
2203 E12	
2204 C13	
2205 C14	
2206 C15	
2207 C1	
2208 C12	
2209 A13	
2210 E13	
2211 D14	
2250 K8	
2251 K10	
2255 L7	
2350 E17	
2351 F17	
2352 H17	
2353 I17	
2380 N15	
2381 N16	
3005 F5	
3006 E7	
3007 F7	
3008 E7	
3015 I6	
3016 I7	
3017 I7	
3018 H7	
3019 I7	
3050 B4	
3051 B4	
3052 B4	
3053 B5	
3054 B5	
3055 D4	
3056 D4	
3057 C5	
3059 B7	
3103 N8	
3104 N8	
3105 M12	
3200 E10	
3201 B9	
3202 D10	
3203 D10	
3204 D10	
3205 D10	
3206 C10	
3207 C10	
3208 C10	
3209 C10	
3210 B13	
3211 D14	
3212 C13	
3213 C14	
3250 J10	
3251 J11	
3255 K6	
3350 E15	
3351 E15	
3352 F15	
3353 F14	
3354 F13	
3355 G13	
3356 G14	
3357 F16	
3358 G13	
3360 G15	
3361 H15	
3362 H14	
3363 H15	
3364 H16	
3365 I13	
3366 I16	
3367 I14	
3368 J13	
3369 J13	
3371 K15	
3380 M15	
3381 M15	
3382 N16	
3383 M16	

IN/OUT PANEL

7-4

7-4

1000 B 5	1906 A 3	2006 C 7	2052 A 8	2100 A 5	2206 C 8	2352 A 7	2910 A 3	2934 C 5	3000 C 6	3014 C 6	3058 A 8	3206 B 8	3350 A 7	3365 A 7	3901 B 3	3967 B 4	5020 B 7	6900 C 3	6982 C 4	7352 B 7	7922 A 3	9002 C 3	9018 A 5	9035 B 5	9052 A 7	9066 C 8
1001 C 5	1920 C 3	2007 B 6	2053 A 8	2101 A 5	2207 C 8	2353 A 8	2911 A 2	2935 B 5	3001 C 6	3015 C 6	3059 B 8	3207 B 8	3351 A 6	3366 A 8	3902 A 3	3968 A 4	5100 A 5	6901 C 3	6983 C 4	7353 A 7	7940 B 4	9003 A 3	9021 A 5	9037 B 5	9053 A 7	9068 A 5
1005 A 8	1970 A 1	2008 C 6	2054 B 8	2102 A 5	2208 C 8	2380 A 5	2912 A 3	2940 C 3	3002 C 6	3016 C 7	3100 A 5	3209 B 8	3352 A 7	3367 A 8	3903 A 3	3969 A 3	5970 B 1	6902 C 3	6984 C 4	7354 A 8	7960 A 3	9006 B 7	9022 A 4	9038 C 7	9054 A 7	9069 B 4
1100 A 6	1971 A 1	2009 C 6	2055 A 8	2103 A 6	2209 C 8	2381 A 4	2920 B 3	2941 C 2	3003 B 6	3017 C 7	3101 A 5	3209 B 8	3353 A 7	3368 B 7	3904 A 3	3980 C 4	6200 B 8	6903 C 3	6985 C 4	7355 A 7	7961 B 4	9007 A 3	9023 B 5	9039 C 5	9055 A 7	9070 C 3
1101 A 5	1972 B 1	2010 C 6	2056 A 8	2104 A 6	2210 C 8	2900 C 3	2921 B 3	2942 B 4	3004 C 6	3018 C 7	3102 A 5	3210 C 8	3354 A 7	3369 B 7	3905 B 3	3981 C 4	6201 B 8	6905 A 3	6986 C 4	7357 B 7	7962 B 5	9008 B 4	9024 C 8	9040 C 5	9056 B 3	9073 A 4
1102 A 5	1974 B 1	2011 C 6	2057 A 8	2105 A 5	2211 C 8	2901 C 3	2922 B 3	2943 B 4	3005 B 6	3019 C 7	3103 A 5	3211 C 8	3355 B 7	3371 B 7	3906 A 3	3982 C 4	6250 B 6	6920 B 3	7000 C 6	7358 B 8	7963 B 4	9009 B 5	9025 C 8	9041 B 7	9057 A 6	9102 A 5
1105 A 5	1975 A 2	2012 C 7	2058 A 8	2106 A 5	2250 A 6	2902 C 3	2923 B 3	2944 B 4	3006 B 7	3050 A 8	3104 A 6	3212 C 8	3356 A 7	3380 B 4	3907 A 3	3983 C 5	6251 B 6	6921 B 3	7001 C 7	7359 A 8	7964 A 4	9010 A 4	9026 B 8	9042 C 8	9058 A 8	9103 B 5
1310 B 4	1976 A 2	2013 C 7	2059 A 8	2107 A 6	2251 A 6	2903 C 3	2924 B 3	2945 B 4	3007 B 7	3051 A 8	3105 A 5	3213 C 8	3357 A 7	3381 A 4	3908 B 3	3984 C 4	6350 A 7	6922 B 3	7050 A 8	7380 A 4	7980 C 4	9011 C 2	9027 B 6	9043 B 6	9059 A 8	9104 A 6
1315 C 8	2000 C 6	2014 C 7	2060 C 5	2200 B 8	2252 B 6	2904 C 3	2925 B 2	2946 B 4	3008 B 7	3052 A 8	3200 B 8	3250 A 6	3358 B 7	3382 A 4	3961 B 3	3985 C 5	6351 A 7	6923 B 3	7200 B 8	7381 A 4	7981 C 5	9012 B 3	9028 C 7	9044 B 3	9060 C 8	9201 C 8
1330 A 4	2001 C 6	2015 C 7	2061 C 5	2201 B 8	2253 B 6	2905 C 3	2926 B 2	2970 C 1	3009 B 6	3053 A 8	3201 B 8	3251 A 6	3360 A 7	3383 A 4	3962 A 4	3986 B 6	6355 B 7	6940 C 3	7201 C 8	7900 A 3	7982 C 4	9013 B 4	9029 C 8	9045 B 7	9061 C 4	9203 B 8
1350 A 4	2002 C 6	2016 C 7	2062 A 8	2202 B 8	2254 B 5	2906 C 3	2927 B 2	2980 C 4	3010 C 6	3054 A 8	3202 B 8	3252 B 6	3361 A 7	3384 A 4	3963 B 4	3987 C 4	6356 B 7	6941 C 3	7250 A 6	7901 A 2	7983 C 5	9014 A 4	9030 C 5	9047 B 7	9062 B 3	9352 B 7
1400 A 7	2003 C 6	2017 C 7	2063 B 8	2203 C 8	2255 A 6	2907 C 3	2931 A 3	2981 C 4	3011 C 6	3055 A 8	3203 B 8	3253 A 5	3362 A 8	3385 A 4	3964 B 4	3988 C 4	6357 B 5	6942 B 3	7251 A 5	7902 A 3	7984 C 4	9015 B 6	9031 B 7	9048 A 7	9063 C 8	9960 B 4
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The schematic diagram illustrates the internal circuitry of the 3081_0259_2_R component. It is organized into several functional blocks:

- FROM INPUT CIRCUIT:** Receives LEFT IN (1450 - 10) and RIGHT IN (1450 - 12) signals. It includes a +10VA and -10VA supply section with resistors 3195, 3194, 6181, 2189, 2195, 6180, 2188, and 2194.
- FROM READWRITE CIRCUIT:** Receives ANA-PB RIGHT (1180 - 3) and LEFT (1180 - 1) signals. It includes a +5V supply section with resistors 3176, 3175, 4K7, and 3172.
- Logic Decoders:** Two 74HC4051D decoders (7451 and 7452) are used for 1-of-8 decoding. They are connected to a 74180 CXA1331S control logic block.
- Output Stages:** Two NJM4560D comparators (7455 -2B and 7455 -2A) drive the LEFT OUT and RIGHT OUT signals. They are connected to a 74180 CXA1331S control logic block.
- Control Logic:** A 74180 CXA1331S block manages various control signals including LINEIN, LINEOUT, MODE, and ATT. It is connected to a 74180 CXA1331S control logic block.
- Power and Grounding:** The circuit is powered by +10VA, -10VA, and +5V supplies. Grounding is indicated by GND and GND A.

The diagram includes a detailed pinout for the 3081_0259_2_R component, showing connections for inputs, outputs, and control signals.

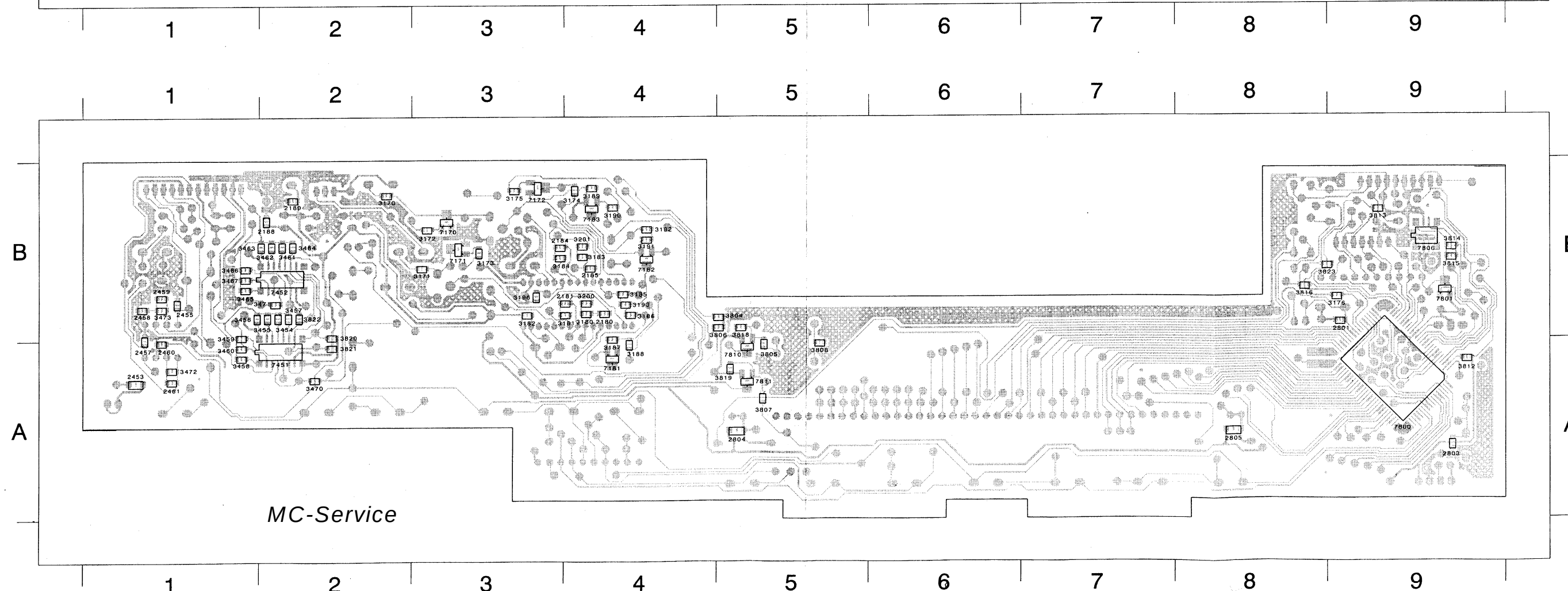
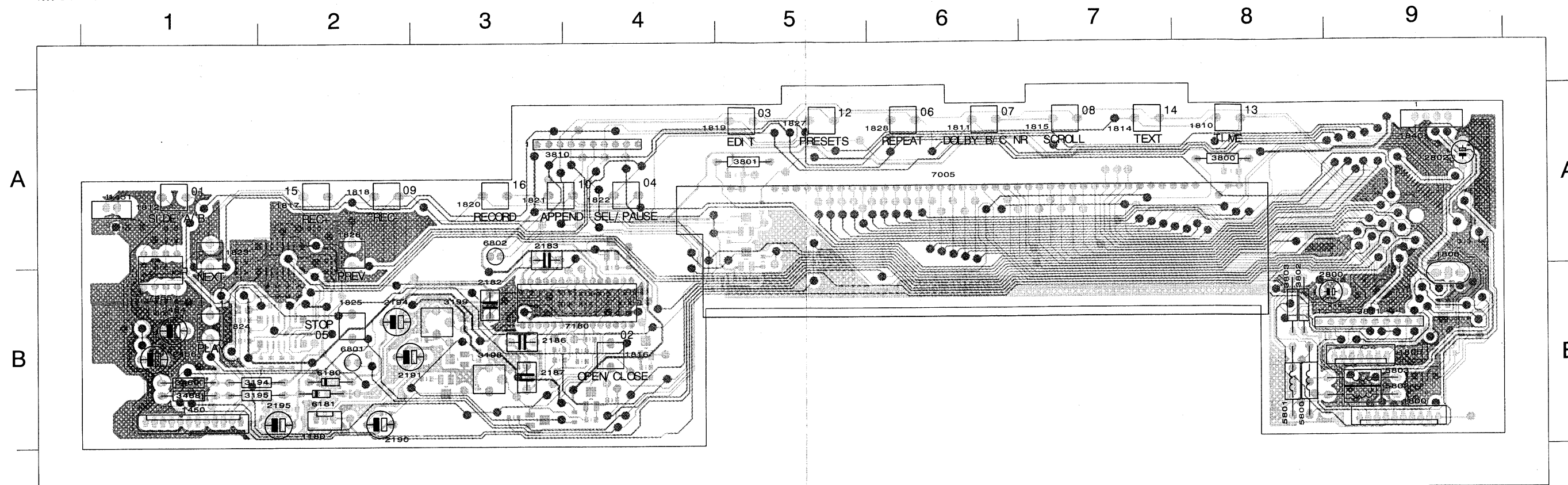
PCS 60 924

FRONT PANEL

7-6

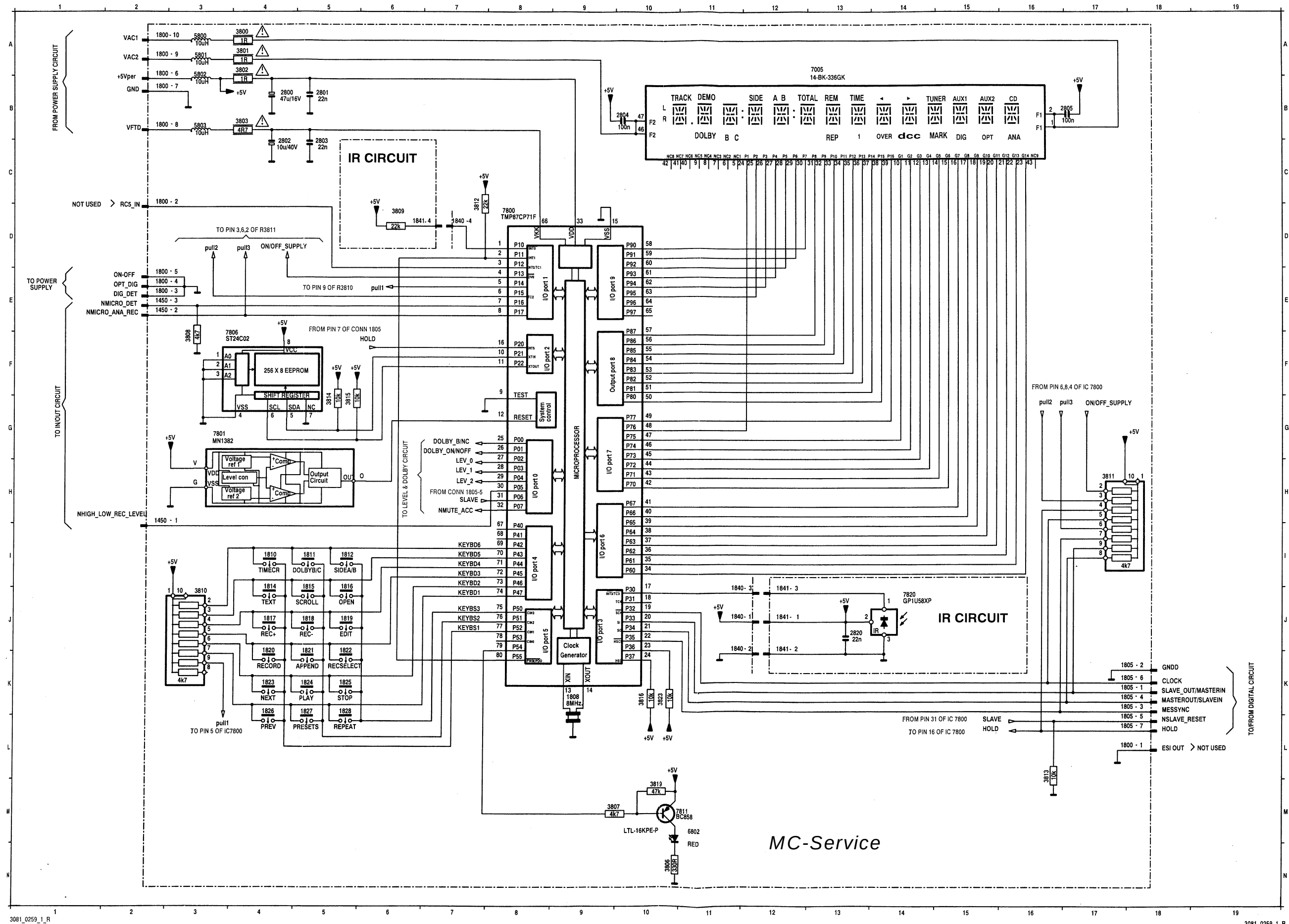
7-6

1180 B 2	1810 A 8	1817 A 2	1823 A 1	1840 A 9	2185 B 4	2191 B 2	2456 B 1	2800 B 9	3170 B 2	3176 B 9	3185 B 4	3191 B 4	3198 B 3	3456 B 1	3462 B 2	3468 B 1	3800 A 8	3806 B 5	3813 B 9	3820 B 2	5802 B 9	7005 A 6	7182 B 4	7801 B 9
1450 B 1	1811 A 6	1818 A 2	1824 B 1	2180 B 4	2186 B 3	2194 B 2	2457 B 1	2801 B 9	3171 B 3	3180 B 4	3186 B 4	3192 B 4	3199 B 3	3457 B 2	3463 B 2	3469 B 1	3801 A 5	3807 A 5	3814 B 9	3821 A 2	5803 B 9	7170 B 3	7183 B 4	7806 B 9
1451 A 1	1812 A 1	1819 A 5	1825 B 2	2181 B 4	2187 B 3	2195 B 2	2458 B 1	2802 A 9	3172 B 3	3181 B 4	3187 B 4	3193 B 4	3200 B 4	3458 A 1	3464 B 2	3470 A 2	3802 B 8	3808 A 5	3815 B 9	3822 B 2	6180 B 2	7171 B 3	7451 A 2	7810 A 5
1800 B 9	1814 A 7	1820 A 3	1826 A 2	2182 B 3	2188 B 2	2453 A 1	2459 B 1	2803 A 9	3173 B 3	3182 B 3	3188 A 4	3194 B 1	3201 B 4	3459 B 1	3465 B 1	3471 B 2	3803 B 8	3810 A 4	3816 B 8	3823 B 8	6181 B 2	7172 B 3	7452 B 2	7811 A 5
1805 B 9	1815 A 7	1821 A 3	1827 A 5	2183 A 3	2189 B 2	2454 B 1	2460 A 1	2804 A 5	3174 B 4	3183 B 4	3189 B 4	3195 B 1	3454 B 2	3460 A 1	3466 B 1	3472 A 1	3804 B 5	3811 B 9	3818 B 5	5800 B 8	6801 B 2	7180 B 4	7455 B 1	
1808 B 9	1816 B 4	1822 A 4	1828 A 6	2184 B 3	2190 B 2	2455 B 1	2461 A 1	2805 A 8	3175 B 3	3184 B 3	3190 B 4	3196 B 3	3455 B 2	3461 B 2	3467 B 1	3473 B 1	3805 A 5	3812 A 9	3819 A 5	5801 B 8	6802 A 3	7181 A 4	7800 A 9	



MC-Service

CONTROL & DISPLAY CIRCUIT DIAGRAM

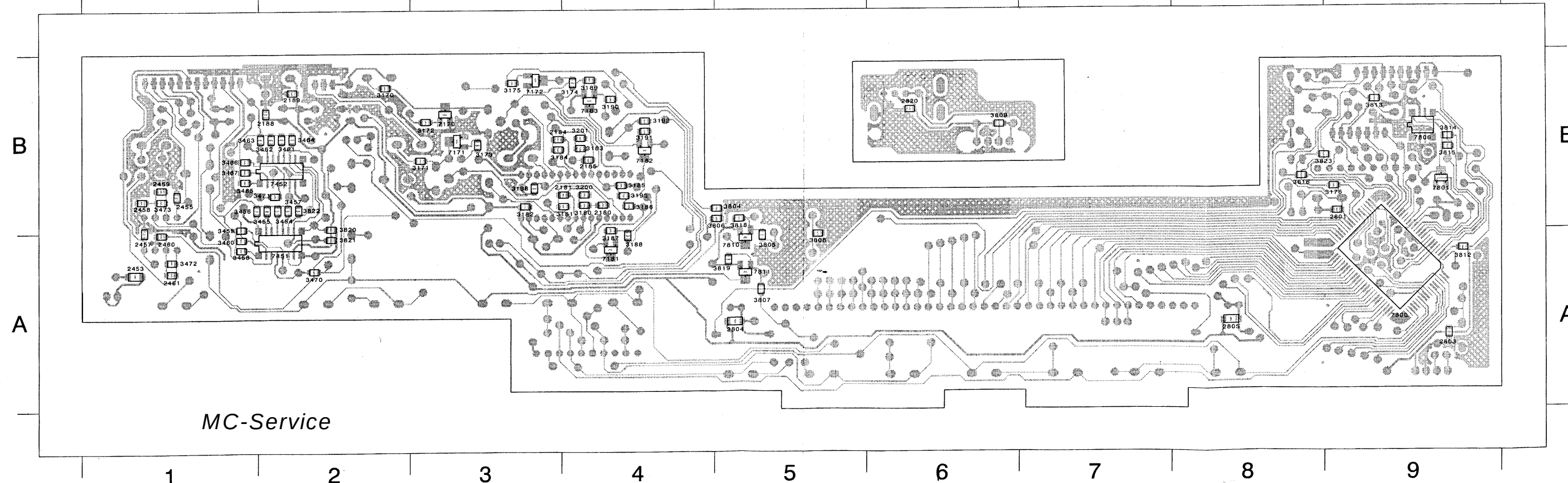
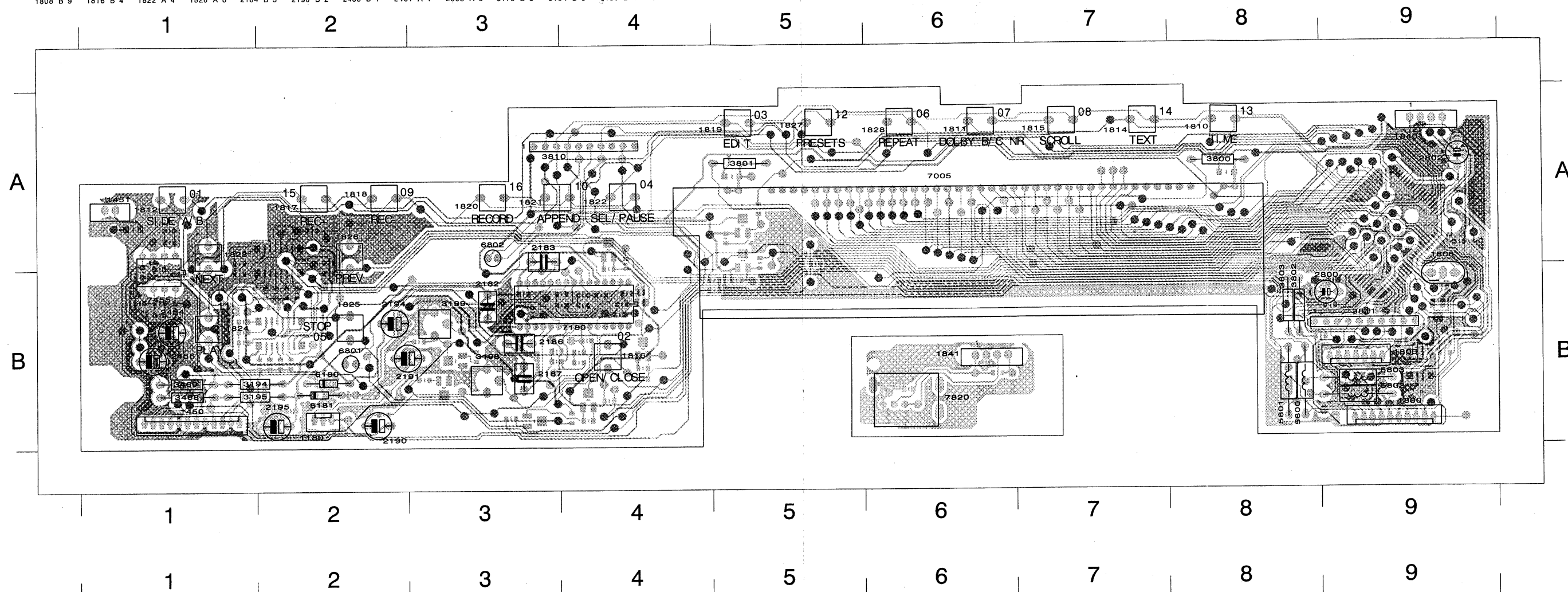


FRONT & I.R. PANEL

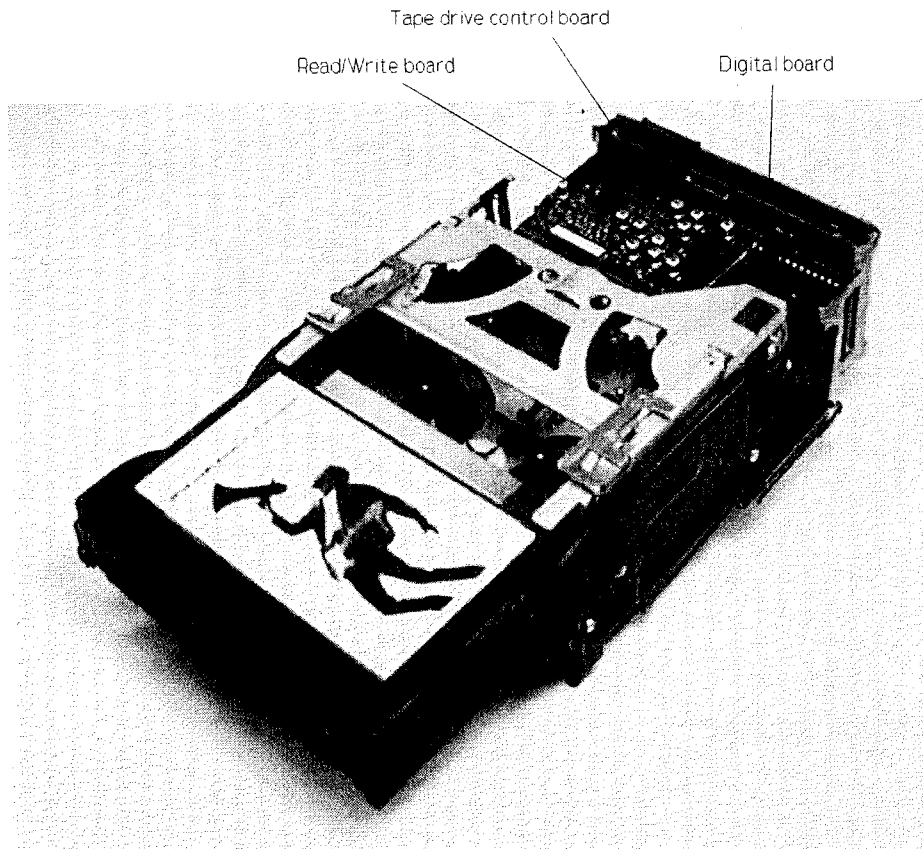
7-8

7-8

1180 B 2	1810 A 8	1817 A 2	1823 A 1	1840 A 9	2185 B 4	2191 B 2	2456 B 1	2800 B 9	3170 B 2	3176 B 9	3185 B 4	3191 B 4	3198 B 3	3456 B 1	3462 B 2	3468 B 1	3800 A 8	3806 B 5	3813 B 9	3820 B 2	5802 B 9	7005 A 6	7182 B 4	7801 B 9
1450 B 1	1811 A 6	1818 A 2	1824 B 1	2180 B 4	2186 B 3	2194 B 2	2457 B 1	2801 B 9	3171 B 3	3180 B 4	3186 B 4	3192 B 4	3199 B 3	3457 B 2	3463 B 2	3469 B 1	3801 A 5	3807 A 5	3814 B 9	3821 A 2	5803 B 9	7170 B 3	7183 B 4	7806 B 9
1451 A 1	1812 A 1	1819 A 5	1825 B 2	2181 B 4	2187 B 3	2195 B 2	2458 B 1	2802 A 9	3172 B 3	3181 B 4	3187 B 4	3193 B 4	3200 B 4	3458 A 1	3464 B 2	3470 A 2	3802 B 8	3808 A 5	3815 B 9	3822 B 2	6180 B 2	7171 B 3	7451 A 2	7810 A 5
1800 B 9	1814 A 7	1820 A 3	1826 A 2	2182 B 3	2188 B 2	2453 A 1	2459 B 1	2803 A 9	3173 B 3	3182 B 3	3188 A 4	3194 B 1	3201 B 4	3459 B 1	3465 B 1	3471 B 2	3803 B 8	3810 A 4	3816 B 8	3823 B 8	6181 B 2	7172 B 3	7452 B 2	7811 A 5
1805 B 9	1815 A 7	1821 A 3	1827 A 5	2183 A 3	2189 B 2	2454 B 1	2460 A 1	2804 A 5	3174 B 4	3183 B 4	3189 B 4	3195 B 3	3454 B 2	3460 A 1	3466 B 1	3472 A 1	3804 B 5	3811 B 9	3818 B 5	5800 B 8	6801 B 2	7180 B 4	7455 B 1	
1808 B 9	1816 B 4	1822 A 4	1828 A 6	2184 B 3	2190 B 2	2455 B 1	2461 A 1	2805 A 8	3175 B 3	3184 B 3	3190 B 4	3196 B 3	3455 B 2	3461 B 2	3467 B 1	3473 B 1	3805 A 5	3812 A 9	3819 A 5	5801 B 8	6802 A 3	7181 A 4	7800 A 9	



DDU DIGITAL DECK UNIT



DIGITAL DECK UNIT 2113

Figure 8.1

The Digital deck unit 2113 consists of:

Mechanical

Loader mechanism

Tape deck mechanism

Electrical

Read / Write board

Tape drive control board

Digital board

SERVICE HINTS

This unit is equipped with a Flexible Printed Circuit board (Flexfoil), so handle that foil with care during disassembly and re-assembly.

In the chapter "Instructions for use" of this manual the cleaning of the DCC-head is explained. See Trouble shooting.

COME TO SERVICE POSITION OF THE
DDU UNIT

action: A1, A2, B

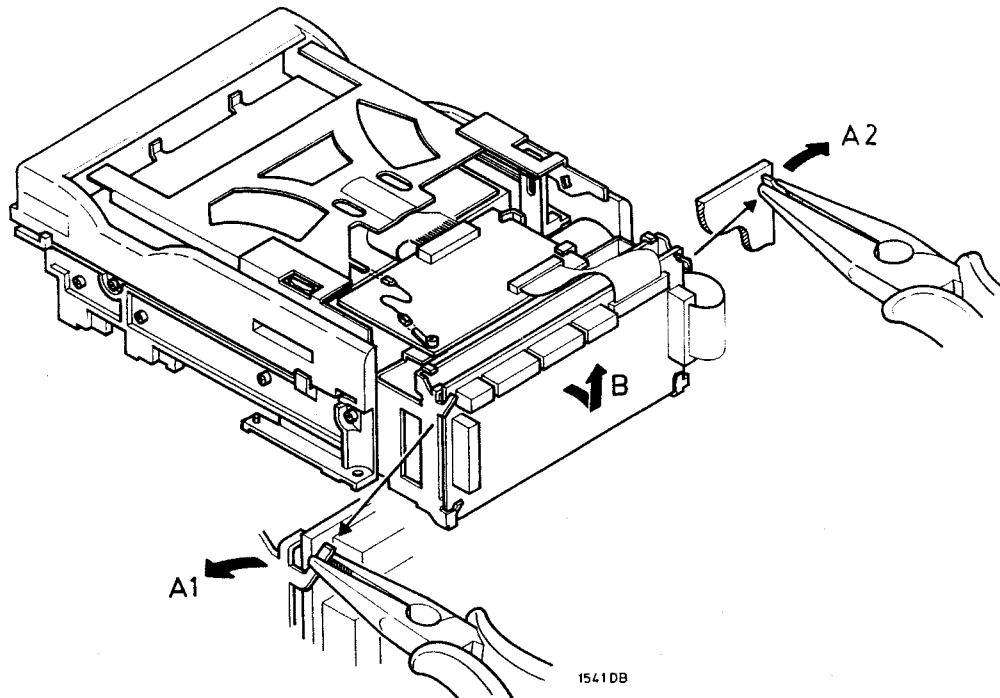


Figure 8.2

SERVICE POSITION DDU UNIT

action: C

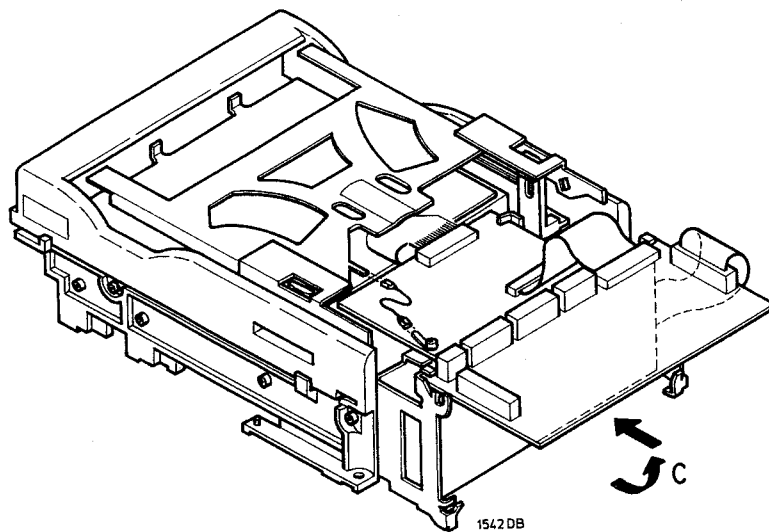


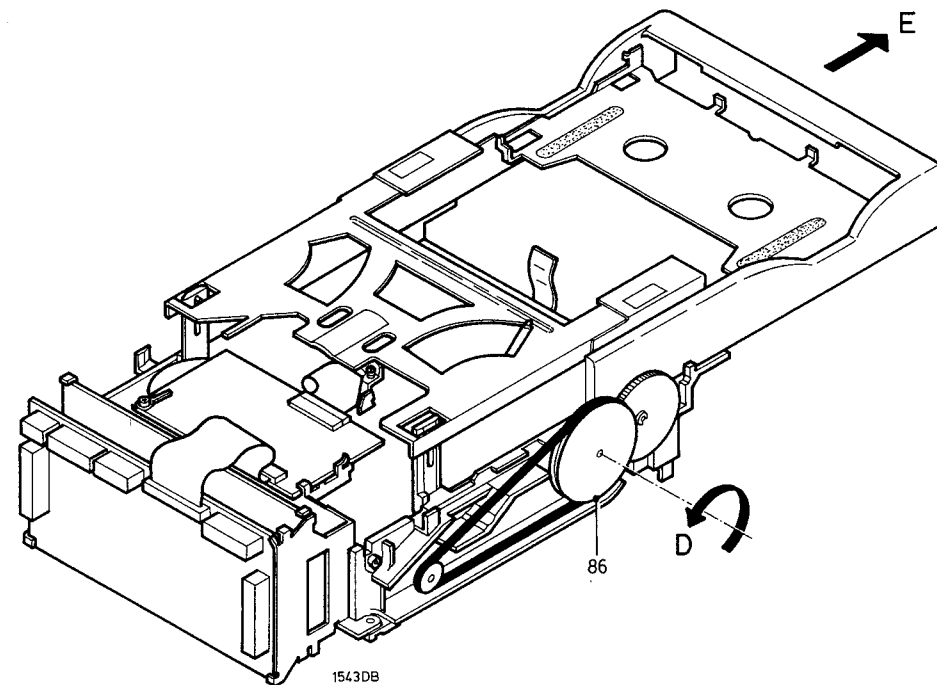
Figure 8.3

Now electrical measurements and checks on Read/Write-, tape drive control- and digital board can be carried out.

DISASSEMBLY INSTRUCTIONS**DISASSEMBLY OF THE LOADER**

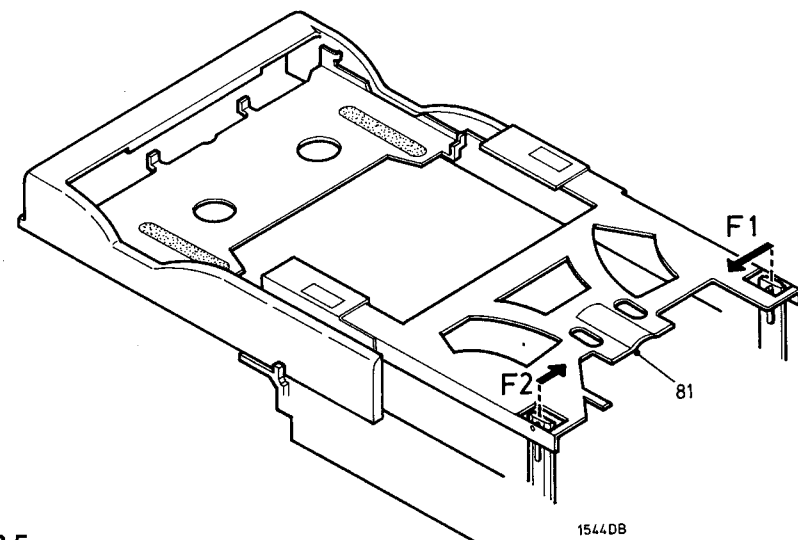
Open tray manually, by moving - counter clockwise - drive gear wheel 86.

action: D, E

**Figure 8.4**

REMOVE CLAMPER ASSEMBLY ITEM 81

action: F1, F2

**Figure 8.5****REPLACEMENT OF DCC-HEAD-SUPPORT-ASSEMBLY**

After performing the actions D, E, F1 and F2, a.o., the DCC head support assembly item 117 can be reached.

REMOVAL HEAD SUPPORT ASSEMBLY ITEM 117

action: G1, G2, G3

Open with action G1 connector 1800 and disconnect head's flexfoil. (action: G2)
Warning! Do not open G1 too far, it will damage the connector. Do not forget to short-circuit the head's flexfoil, action G3.

Remove pinch-rollers 102 and 118

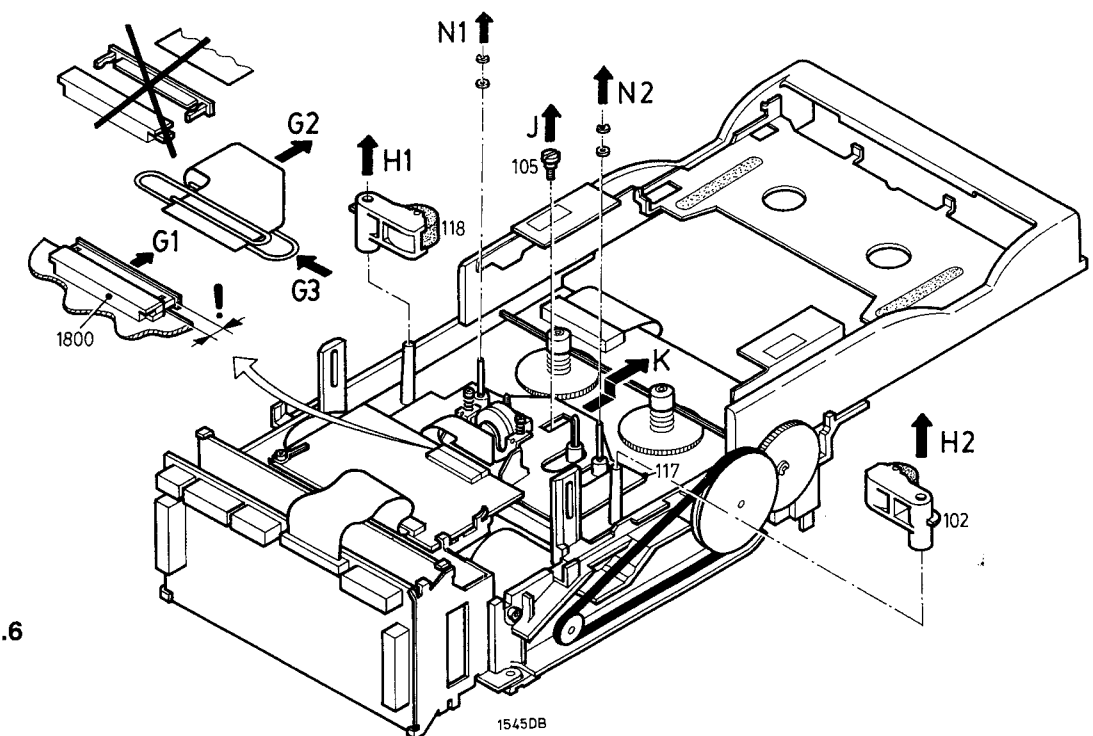
action: H1, H2

Remove head support fixation screw 105

action: J

Remove head support assembly 117.

action: K

**Figure 8.6**

REMOVAL FLYWHEELS ITEMS 108 AND 126.

Remove connectors 1501, 1502, 1503 and 1504.

action: L1, L2, L3, L4

Remove cover 509

action: M1, M2

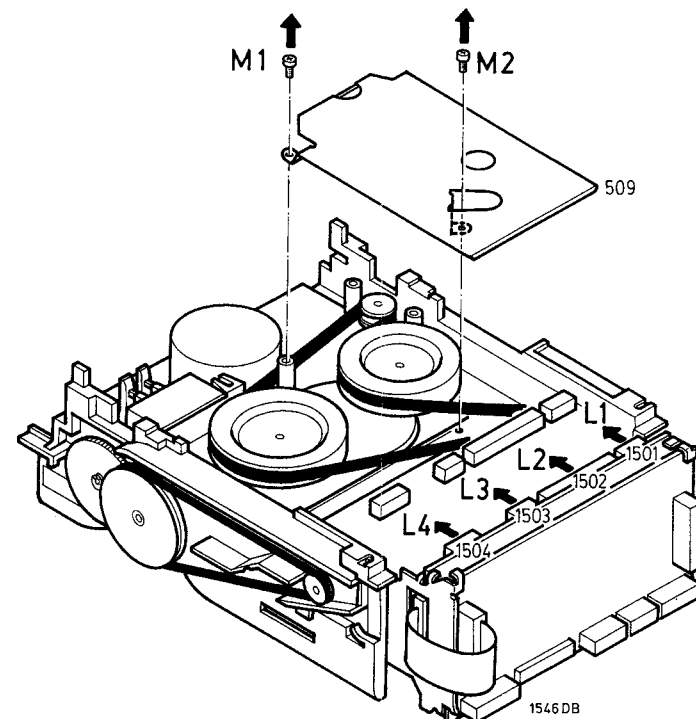


Figure 8.7

Remove E-clips E1.65. Now flywheels can be taken out. Pay attention to the washers! See also Exploded View drawing of Tape deck.

action: N1, N2

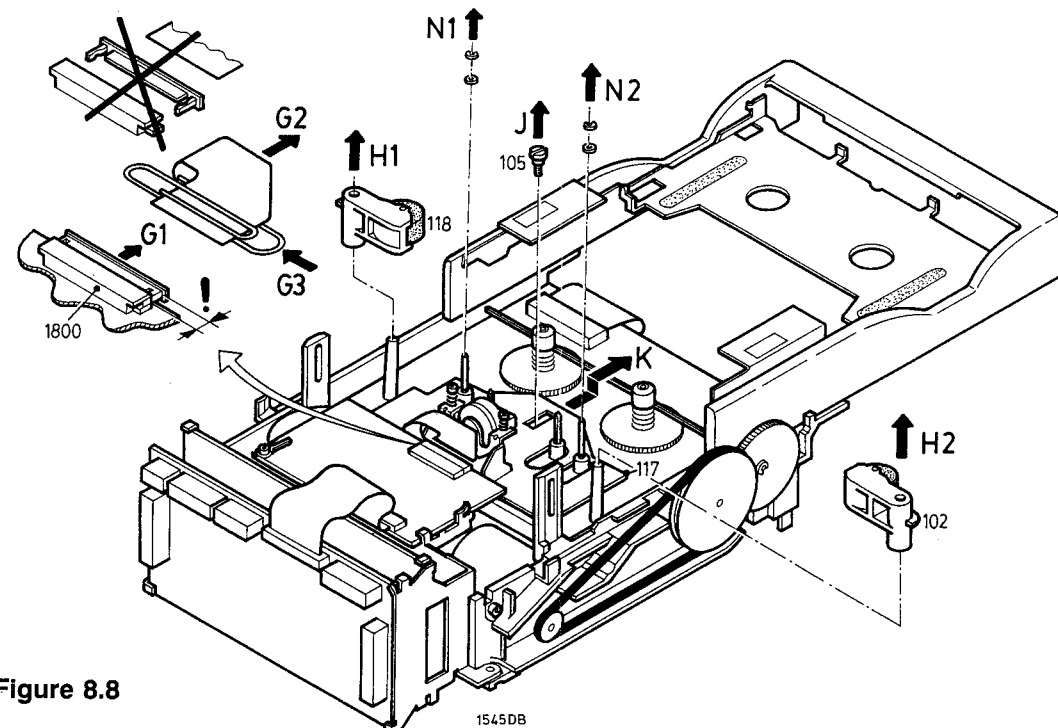


Figure 8.8

After removal of the flywheels, a.o. the printed board item 506 can be loosened, after desoldering Solenoid wires (L101), removing the solenoid fixing screw M2.6x6, item 114 (Solenoid coil), the command play arm 112 and Wind Motor M101 (item 123).

REMOVAL TAPE DECK CHASSIS 505. (Previous actions: G1, G2, G3)

Remove screws printed board block item 587

action: O1, O2

Remove block item 587

action: P

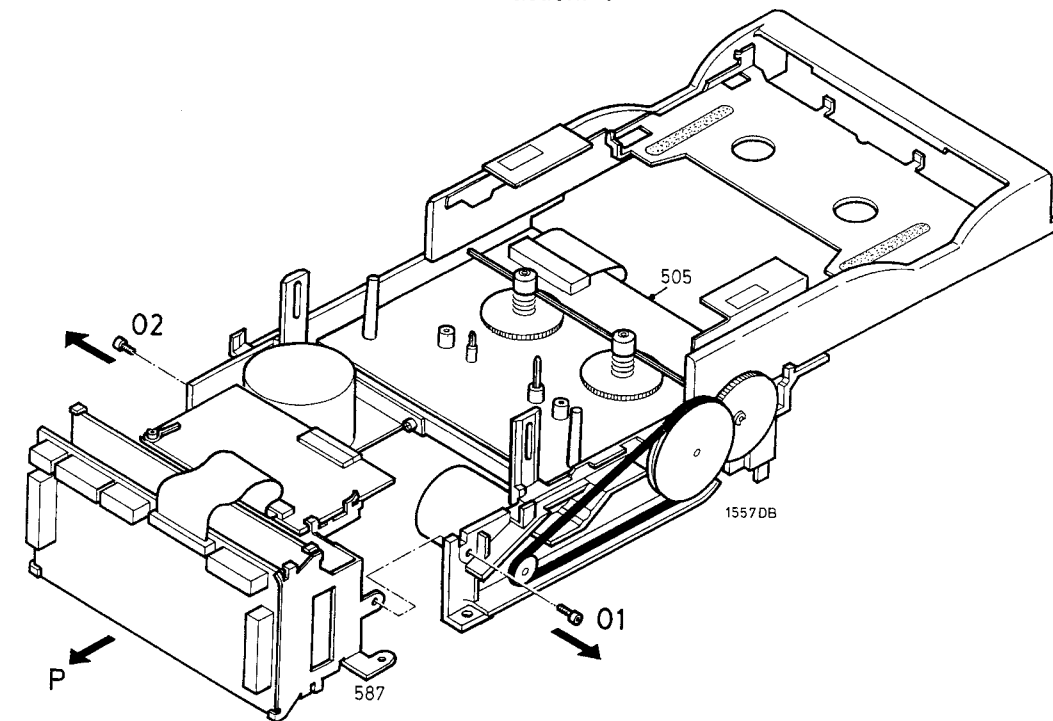


Figure 8.9

Remove E-ring E2 from axle 94

action: Q

Remove 4 tape deck fixation screws M2.6x6

action: R1, R2, R3, R4

Remove chassis 505

action: S1, S2, S3

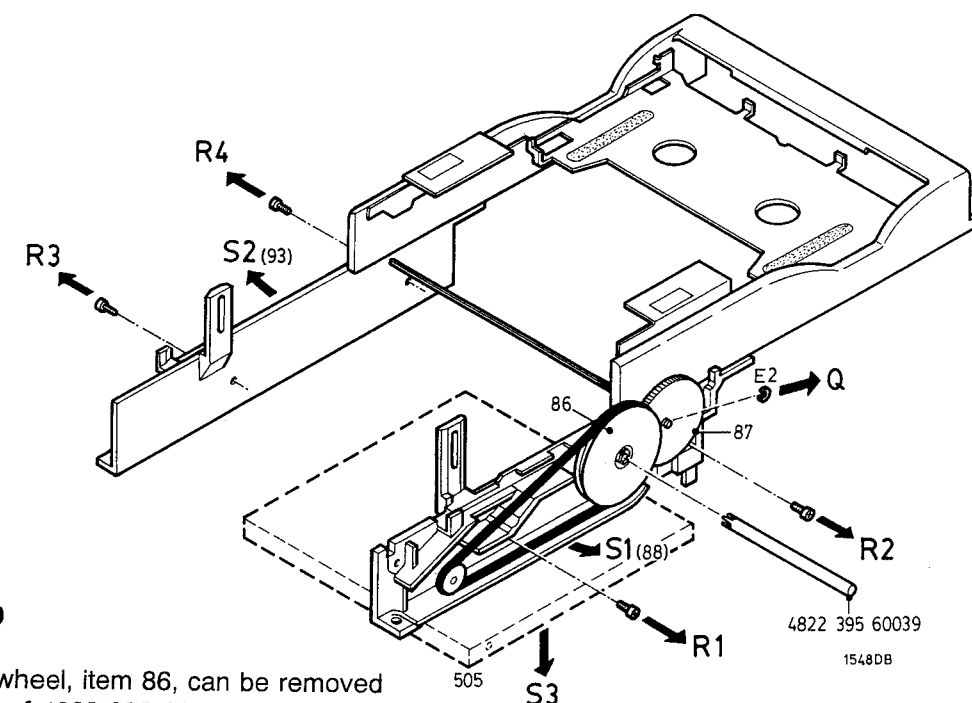


Figure 8.10

Drive gear wheel, item 86, can be removed with the aid of 4822 395 60039

DEMOUNTING AND MOUNTING TRAY ASSEMBLY ITEM 82

Keep with self-adhesive tape item 82 in mounted condition before loosening from the rest of the loader/tape deck.

action: T1, T2

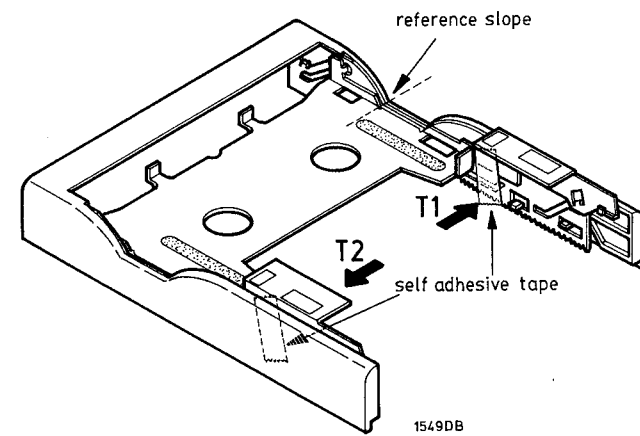


Figure 8.11

Exploded view of item 82

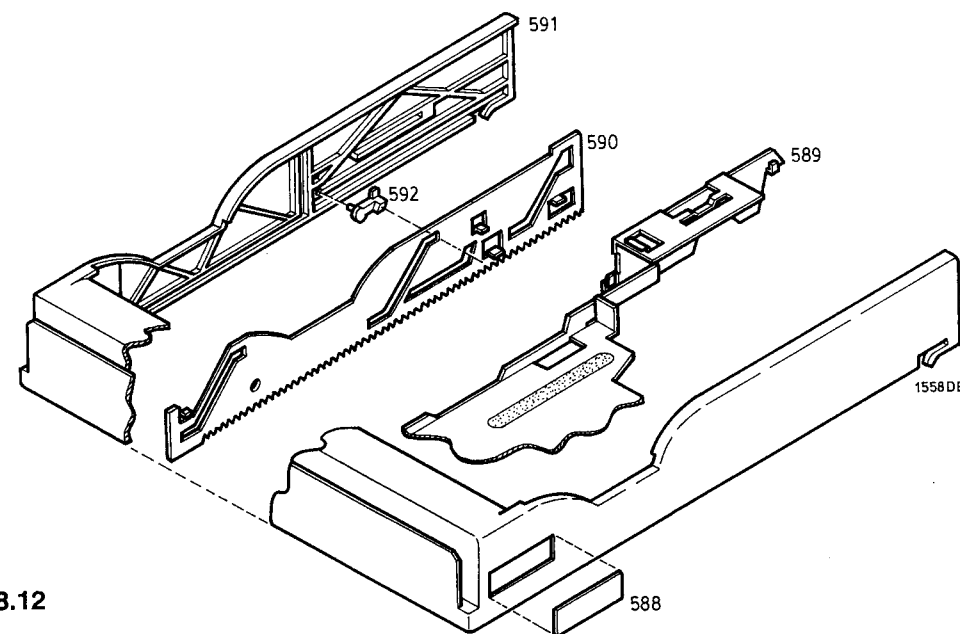


Figure 8.12

HINTS FOR MOUNTING

Mounting the loose components of tray assembly (item 82)

action: U1, U2, U3, U4

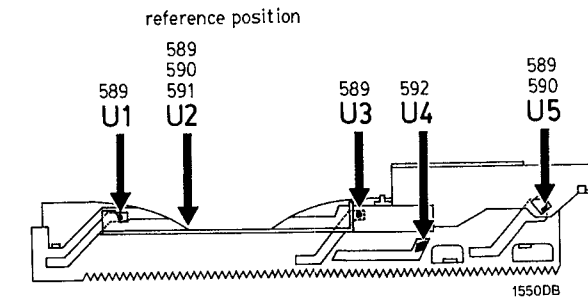


Figure 8.13

Mounting spring 89

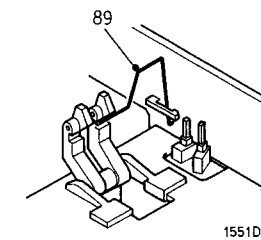


Figure 8.14

Mounting gearwheel item 111
Positioning gearwheel 111

STOP MODE

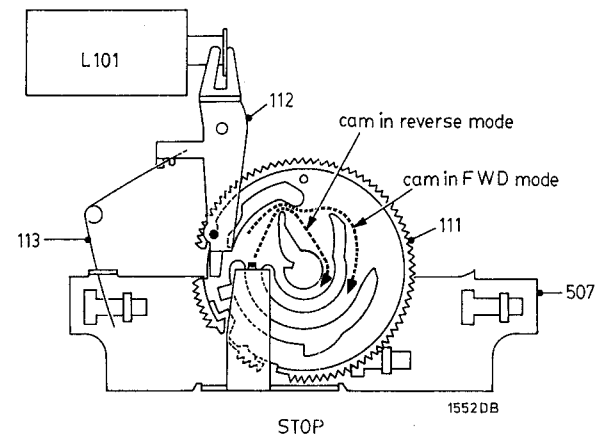


Figure 8.15

Mounting belt 122

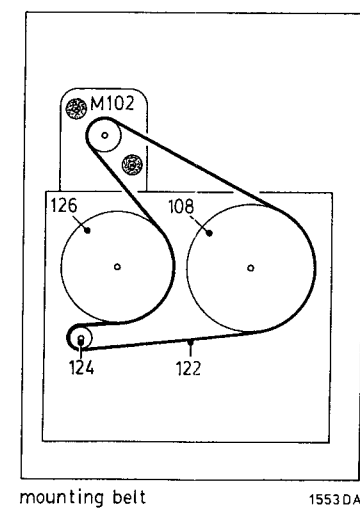


Figure 8.16

AZIMUTH ADJUSTMENT

Due to the Fixed Azimuth Tape Guides (FATG) and Azimuth Locking Pins (ALP), with a mirror cassette (4822 395 30288) the azimuth can be adjusted.

See next figure. The mirror picture can be divided into two parts. One part reaches from first FATG to Head mid position, and the other part from Head mid position to the other FATG.

Adjust with the first azimuth screw, seen from tape direction, for synchronous left and right part of the mirror picture.

action: W

IN PLAY MODE

Action: W1, $X1 = X2$

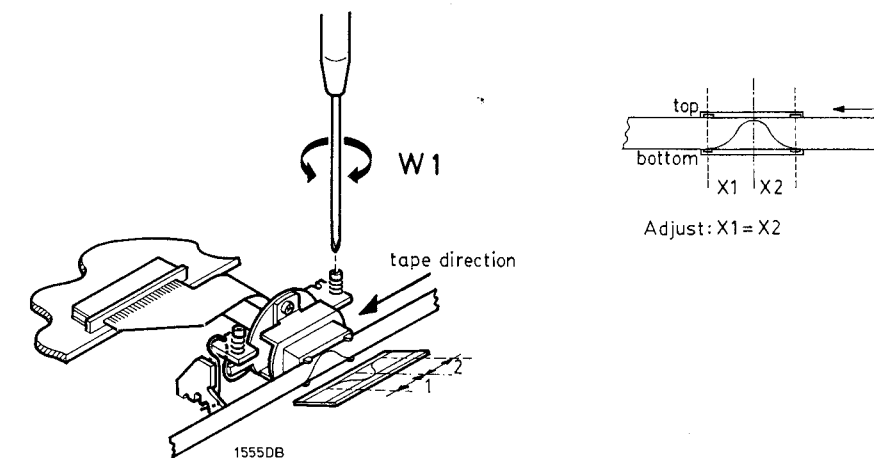


Figure 8.17

IN REVERSE MODE

Action: W2, $X1 = X2$

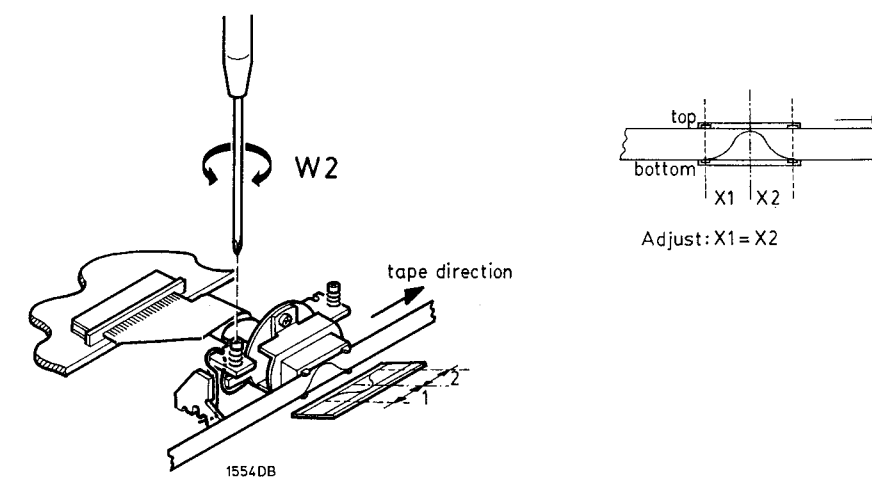


Figure 8.18

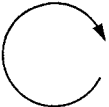
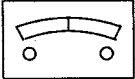
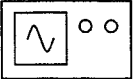
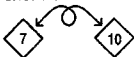
ABBREVIATIONS

A0	Address SRAM; Address DRAM	COA	Common analog
A1	Address SRAM; Address DRAM	COAXIAL IN	IEC958 high sensitive input
A1 0/RAS	Address SRAM; RAS DRAM	COD	Common digital
A1 1	Address SRAM	COPY	copyright status bit
A1 2/PinO5	Address SRAM; Address DRAM; Port expander output 5	CRO2/TRAY_OPEN	CRO2/FE cassette detection switch input
A1 3/PinO2	Address SRAM; Address DRAM; Port expander output 2		if N_CASS_PRES = L L = FE; H = CRO2
A1 4/PinO1	Address SRAM; Address DRAM; Port expander output 1		if N_CASS_PRES = H L = tray fully opened, H = tray is not fully opened
A1 5/PinO4	Address SRAM; Address DRAM; Port expander output 4	CTRLMODE	select μ P/stand-alone mode
A1 6/PinO3	Address SRAM; Address DRAM; Port expander output 3	D0	Data SRAM; Data DRAM
A2	Address SRAM; Address DRAM	D1	Data SRAM; Data DRAM
A3	Address SRAM; Address DRAM	D2	Data SRAM; Data DRAM
A4	Address SRAM; Address DRAM	D3	Data SRAM; Data DRAM
A5	Address SRAM; Address DRAM	D4	Data SRAM;
A6	Address SRAM; Address DRAM	D5	Data SRAM;
A7	Address SRAM; Address DRAM	D6	Data SRAM;
A8	Address SRAM; Address DRAM	D7	Data SRAM;
A9/CAS	Address SRAM; CAS for DRAM	DACL	Analog audio output left
A1+	Analog reader ACC Left channel	DACR	Analog audio output right
A2+	Analog reader ACC Right channel	DATA	data input
ACC/NDCC	Analog or DCC playback	DCC_CASS_PRES	DCC cassette present switch input
ANAEYE	Analogue eye pattern output	DEEM	pre-emphasis output bit
ANAL	ACC output Left	DEEM1	deeemphasis on/off
ANAR	ACC output Right	DEEM2	deeemphasis on/off
ATSB	12 dB attenuation(active LOW)	DEEMDAC	DAC control output.
ATTDAC	DAC attenuation control.	DIGITAL OUT	IEC958 output
AZCHK	channel 0 and channel 7 azimuth monitor.	DSMB	double speed mode(active LOW).
BCK	bit clock input.	ERCOSTAT	ERCO status, for test only
BIAS	Bias current for ADC	FDAI	filtered serial data input(from ADAS)
BIL	buffer op-amp inverting input for left channel.	FDAO	filtered serial data output(to ADAS)
BIR	buffer op-amp inverting input for right channel.	FDCL	filtered data bit clock
BOL	buffer op-amp inverting input for left channel.	FDIR	PASC mode encode/decode
BOR	buffer op-amp output for right channel.	FDWS	filtered data word select
CAP_A	Capstan motor control connection A	FILTCL	capacitor for left channel 1st order filter function.
CAP_B	Capstan motor control connection B	FILTCL	capacitor for right channel 1st order filter function.
CAPSTAN	Low output level switches the capstan motor on.	FRESET	reset signal from codec.
CAPSTAN+	Capstan motor + connection	FS256	master audio clock at 256x sample frequency
CAPSTAN-	Capstan motor - connection	FS32	indicates sample frequency=32kHz
CEDC	system clock output.	FS44	indicates sample frequency=44kHz
CHMODE	use of channel status(0=professional use, 1=consumer use)	FS48	indicates sample frequency=48kHz
CHROME	Indication if a chrome analog cassette is inserted.	FSYNC	subband synchronisation on F-I ² S bus.
CHTST1	Channel test pin 1	GNDA	Analog ground
CHTST2	Channel test pin 2	GNDD	Digital ground
CKIN	system clock input.	GNDS	Analog motors ground
CKSL1	clock selection 1	HOLD	DDU is busy flag
CKSL2	clock selection 2	HPEN	high pass filter enable input.
CLK22	22.5792 MHz buffered clock output of SFC3.	I ² SOUTEN	serial audio output enable.
CLK24	24.576 MHz XTAL buffered clock output of SFC3.	I ² SSEL	select auxiliary input or normal input in transmit mode.
CLKSEL	select system clock	ICLAMP	Write current output.
CLOCK	Serial data clock from controller	IECIN0	TTL level IEC input.
CLOSE_TRAY	Tray motor connection (+10V = Open tray; 0V = Close tray)	IECIN1	high sensitivity IEC input.
		IECO	digital audio output for optical and transformer link.
		IECOEN	digital audio output enable
		IECOP	IEC958 digital audio output.
		IECSEL	select IEC input 0 or 1
		IN0-7	Head signals of main data channels
		INAUX	Head signal of auxiliary data.

INL Analog input signals from DCC head.
 INMFL Magnetic feedback amplifier input left.
 INMFR Magnetic feedback amplifier input right.
 INR Analog input signals from DCC head.
 INVALID validity of audio sample input/output
 IREF current reference node.
 L3CLK L3 bus clock line
 L3CLKC codec interface clock
 L3CLKM microcontroller interface clock
 L3DATA L3 bus serial data line
 L3DATAC codec interface data
 L3DATAM microcontroller interface data
 L3INT L3 interrupt output
 L3MODE Mode line for L3 interface
 L3MODEC codec interface mode
 L3MODEM microcontroller interface mode
 L3REF L3 bus timing reference
 LADDR microprocessor interface address
 LCLK microprocessor interface clock line
 input
 LDATA microprocessor interface data line
 input/output
 LEFT INPUT Analog audio input left
 LMODE microprocessor interface mode line
 input
 LOWPOWER Low power playback reset
 LTCNT0 LT compatible interface mode control
 LTCNT0C SAA2002 SFC interface mode control
 LTCNT1 LT compatible interface mode control
 LTCNT1C SAA2002 SFC interface mode control
 M0 (test mode input) connect to VDD
 M1 (test mode input) connect to VDD
 MCLK 6.144 MHz clock output
 MESSYNC Message synchronisation with
 controller
 MLE Latch enable signal for digital filter
 MSYNC Message synchronisation with
 Digital μ P
 MUSB muting(active LOW)
 MUTE audio mute input
 MUTEDAC DAC control or general purpose output
 N_CASS_PRES Cassette present switch input
 N_DCC_REC_PROT DCC record protect switch input
 N_FAILP Power fail(L = power failure)
 N_FLAP_PRESENT Flap loader present indication
 N_HOLE3 DCC tape length indication switch
 input
 N_HOLE4 DCC tape length indication switch
 input
 N_HOLE5 DCC tape length indication switch
 input
 N_PLAY_POS Indication if head is in play position
 N_QREV_PRES Quick reverse sensor present
 N_TRAY_IN Tray switch input
 NC not connected
 N_DDC_REC_PROT DCC record protection switch input
 N_MUTE Mute for audio channels(active low)
 NODONE No done state selection
 N_RESET Master reset Digital Unit
 OEN Output Enable for RAM
 OPEN_TRAY Tray motor connection(+10V = Close
 tray; 0V = Open tray)
 OPTICAL IN IEC958 input from optical receiver
 OUTAUX Parallel output of read IC.
 OVLD overload indication output.

PINO1 Port expander output 1
 PinO2/SPEEDB Port expander output 2/ PWM
 capstan control output for deck B
 PLAY MAG Connection to the solenoid on the
 DDU deck.
 POR Power On Reset
 PRGSTAT TFE3 program status, for test only
 PWRDWN enable power-down input in the
 standby mode
 Put DRP into power down mode
 QA-QJ Signal for write heads.
 QUICK_REVERSE Quick reverse input signal
 R0+ Digital reader CH0(Hot)
 R1+ Digital reader CH1(Hot)
 R2+ Digital reader CH2(Hot)
 R3+ Digital reader CH3(Hot)
 R4+ Digital reader CH4(Hot)
 R5+ Digital reader CH5(Hot)
 R6+ Digital reader CH6(Hot)
 R7+ Digital reader CH7(Hot)
 RCfil pin for PLL loop filter
 RCint pin for integrating capacitor
 RDMUX Analogue multiplexed input from
 READ AMPLIFIER
 RDSYNC Synchronisation output for READ
 AMPLIFIER
 RESET Reset signal from Digital Unit con-
 troller
 RESET_UP Reset tape drive module μ P
 RESOL0 resolution selection 0
 RESOL1 resolution selection 1
 RIGHT INPUT Analog audio input right
 RX+ Digital reader AUX channel(Hot)
 RXD Serial data input from tape drive unit
 SBCL Bit clock for sub-band I2S interface.
 SBCL sub-band bit clock
 SBDA Data line for sub-band I2S interface
 DRP
 SBDIR Direction line for sub-band I2S
 interface DRP
 SBEF Sub-band I2S error flag line
 SBMCLK Master clock for sub-band I2S
 interface DRP
 SBWS Word selector for sub-band I2S
 interface DRP.
 SCK I2S bus clock line
 SCL baseband bit clock
 SD serial audio data input/output; I²S-bus
 SDA1 baseband serial data to/from DAIO
 and ADC
 SDA2 baseband serial data output to DAC
 SDAD Serial data from AD-converter
 SDAUX auxiliary serial data input; I²S-bus
 SDDAC I2S bus data line for DAC
 SDO serial interface data output.
 SFC3COMP SFC3(SAA2003) compatibility mode
 SFOR input for selecting serial interface
 output format.
 SHIELD Shield connection
 SLAVE input for selecting serial interface
 operating mode MASTER/SLAVE.
 Serial data from controller
 SLAVE_IN Serial data to controller
 SLAVE_OUT Serial data to controller
 SPEED PWM capstan control output for deck
 SREEL Tacho Supply reel
 STANDBY device inactive
 STD input for selecting STANDBY mode.

STROBE strobe for control register(active high)
 SUBSTR Substrate connection
 SWS serial interface word select signal.
 SYNCDAL settings synchronisation for DAIO
 SYSCLKI system clock input
 SYSCLKO system clock output
 TA1 Feedback conductor ACC Left channel
 TA2 Feedback conductor ACC Left channel
 TA8 Feedback conductor ACC Right chan-
 nel
 TA9 Feedback conductor ACC Right chan-
 nel
 TCLOCK 3.072 MHz clock output for tape I/O
 TD1 Test conductor digital
 TD2 Test conductor digital
 TEST0 test mode select
 TEST1 test mode select
 TEST2 Test mode select
 TREEL Tacho Take-up reel
 TXD Serial data output to tape drive unit
 synchronisation for output user da-
 ta(0=data available, 1=no data)
 UNLOCK PLL out-of-lock(0=not locked, 1=loc-
 ked)
 URDA unreliable data from drive processing
 VDACN negative 1 bit DAC reference voltage
 input.(connected 0V)
 VDACP positive 1 bit DAC reference voltage
 input.(connected 5V)
 VOL left channel output.
 VOR right channel output.
 W01 Digital writer(CH0/CH1)
 W12 Digital writer(CH1/CH2)
 W23 Digital writer(CH2/CH3)
 W34 Digital writer(CH3/CH4)
 W45 Digital writer(CH4/CH5)
 W56 Digital writer(CH5/CH6)
 W67 Digital writer(CH6/CH7)
 W7- Digital writer(CH7)
 WDATA Serial output to WRITE AMPLIFIER
 WEN Write enable for RAM
 WIND+ Reel motor + connection
 WIND- Reel motor - connection
 WRITE-STDBY Write amplifier stand-by
 WS word select input/output, I²S-bus
 WX- Digital writer(AUX channel)
 WX0 Digital writer(AUX channel/CH0)
 X22IN 22.5792 MHz XTAL oscillator input
 X22OUT 22.5792 MHz XTAL oscillator output
 X24IN 24.576 MHz XTAL oscillator input
 X24OUT 24.576 MHz XTAL oscillator output
 X256 master audio clock input from external
 source
 Xin system clock input

TOOLS	REMARKS				
TAPE SPEED					
USE TEST CASSETTE "SBC420" 3150 Hz 4822 397 30071	PLAYBACK MODE	 OR  ANAR ANAL	ON TAPE DRIVE PANEL R3543 (A-SIDE) R3542 (B-SIDE)	USE f-COUNTER ADJUST BOTH SIDES TO f = 3150 Hz +/- 0.25 %	
WRITE CURRENT					
USE 9.6 kHz CALIBRATION TAPE 4822 397 30264	PLAYBACK MODE ON READ/WRITE PANEL SHORT CIRCUIT AGC 	ON READ/WRITE PANEL   RDSYNC RDMUX			MEASURE PEAK TO PEAK VALUE OF RDMUX SIGNAL TRIGGER ON RDSYNC (AVERAGE VALUE)
	IF RDMUX OUTPUT CLIPS (>3Vpp) CONNECT  VIA POTMETER OF 47k TO GROUND 		POTMETER 47k		ADJUST UNTIL RDMUX SIGNAL DOESN'T CLIP ANYMORE
USE DCC BLANC CASSETTE	RECORD MODE	 VCLAMP	ON READ/WRITE PANEL R3888		VCLAMP = Iwrite(*) x Rtot ADJUST VCLAMP TO 1.2Vpp(*)
	MAKE RECORDING ON VIRGIN PIECE OF TAPE				
	PLAYBACK MODE PLAYBACK OWN RECORDING	  RDSYNC RDMUX			MEASURE PEAK TO PEAK VALUE OF RDMUX SIGNAL TRIGGER ON RDSYNC (AVERAGE VALUE)
	RECORD MODE	 VCLAMP	ON READ/WRITE PANEL R3888		ADJUST TO DESIRED WRITE CURRENT = $\frac{V_{pp} \text{ RDMUX } 9.6\text{kHz}}{V_{pp} \text{ OWN RECORDING}} \times 110\text{mA}$
	REMOVE SHORT CIRCUIT  TO ACTIVATE AGC				

(*) ON FLEXIBLE CABLE OF DCC HEAD, THE ADVISED WRITE CURRENT HAS BEEN INDICATED. VCLAMP = NOTED WRITE CURRENT x Rtot(10 Ohm)

8-8



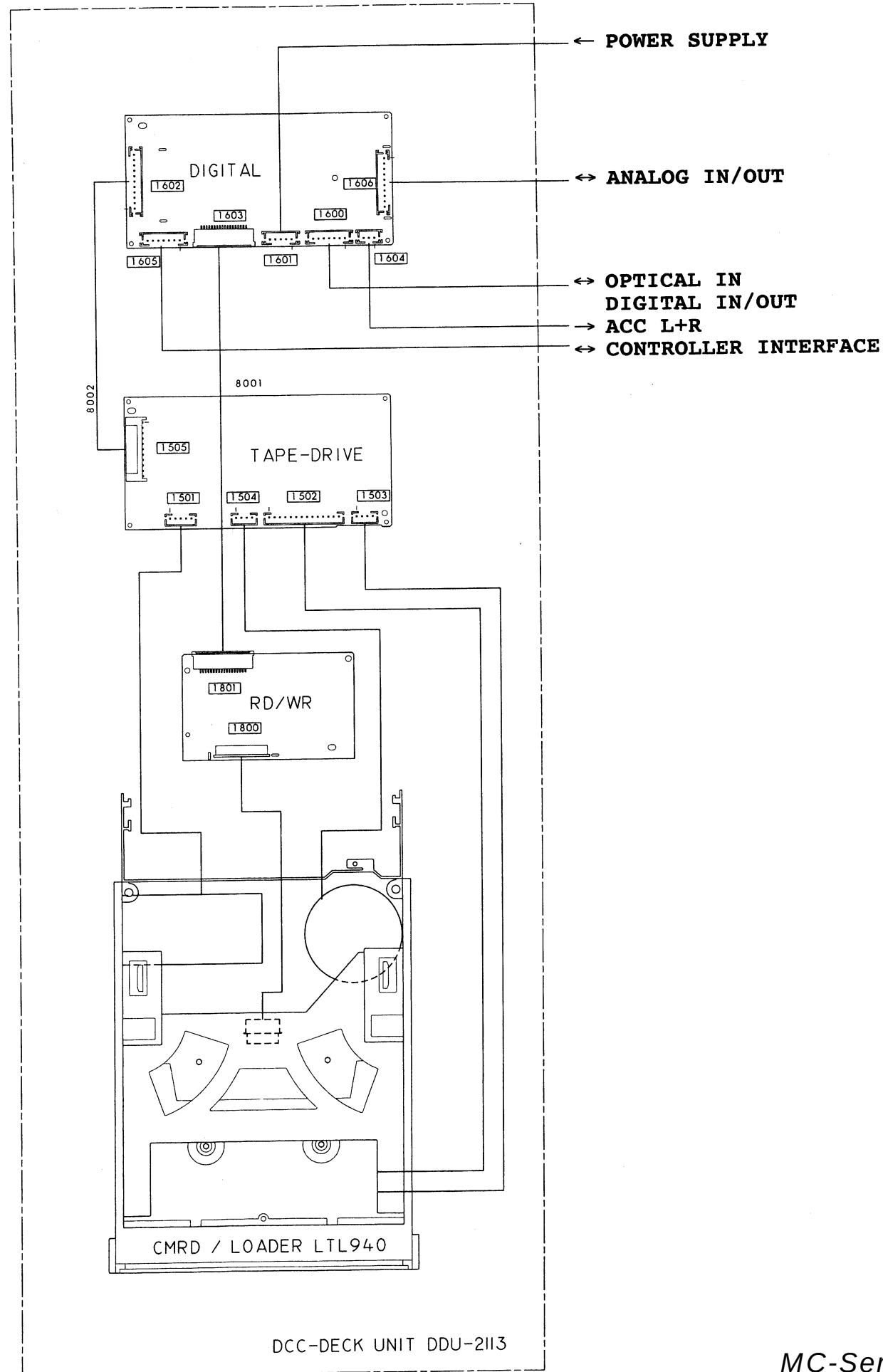
- 1 = ANAL
2 = GNDA
3 = ANAR

- 1 = CAPSTAN-
2 = CAPSTAN+
3 = CAP_A
4 = CAP_B

- 1 = TXD
2 = WX-
3 = RX+
4 = WX0
5 = R0+
6 = W01
7 = R1+
8 = W12
9 = R2+
10 = W23
11 = R3+
12 = W34
13 = COD
14 = W45
15 = R4+
16 = W56
17 = R5+
18 = W67
19 = R6+
20 = W7-
21 = R7+
22 = TD2
23 = TA8
24 = A2+
25 = TA9
26 = TA1
27 = A1+
28 = COA
29 = TA2
30 = SHIELD

WIRING DIAGRAM DDU

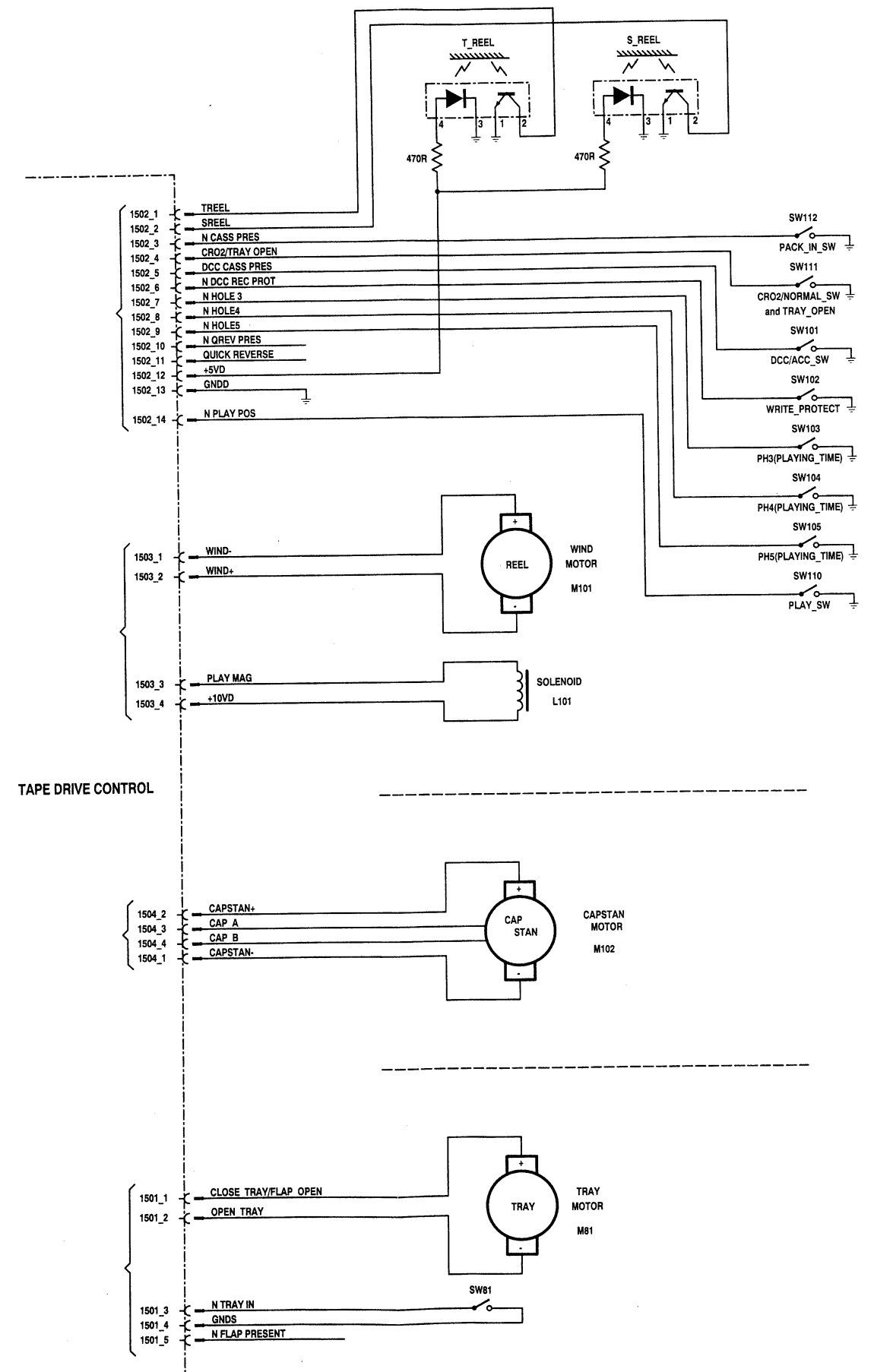
8-9



MC-Service

WIRING DIAGRAM DCC DECK

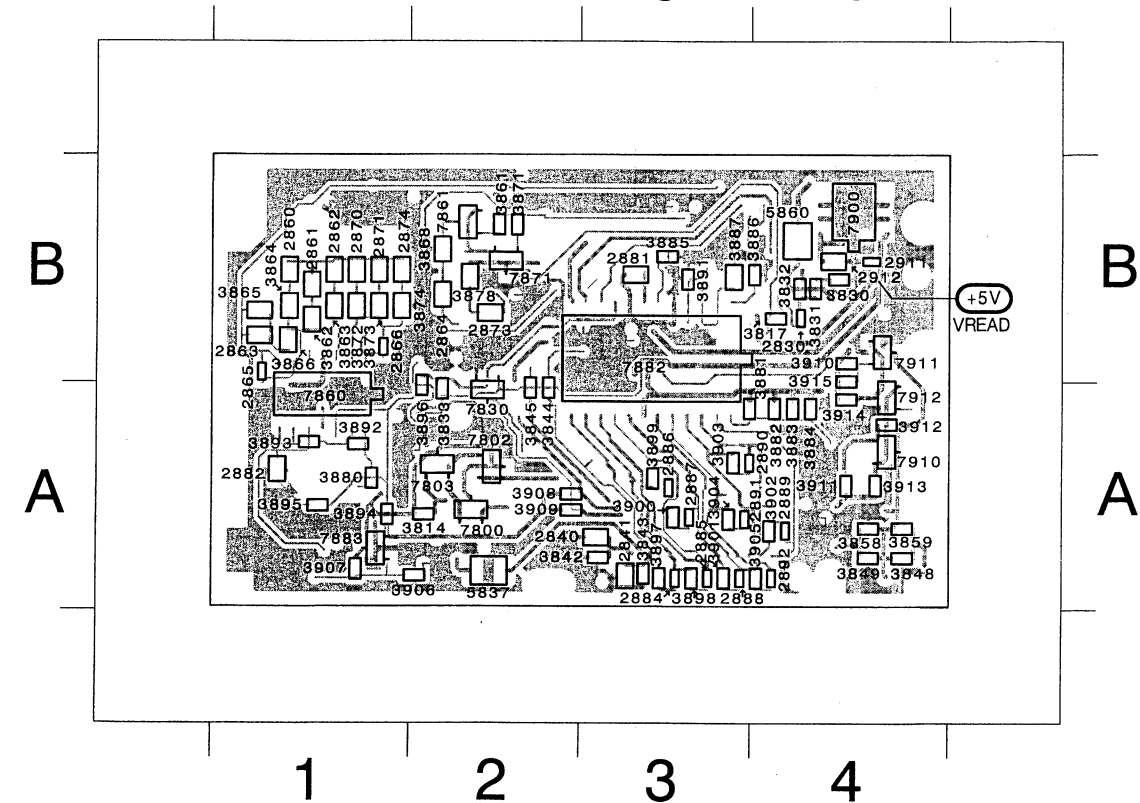
8-9



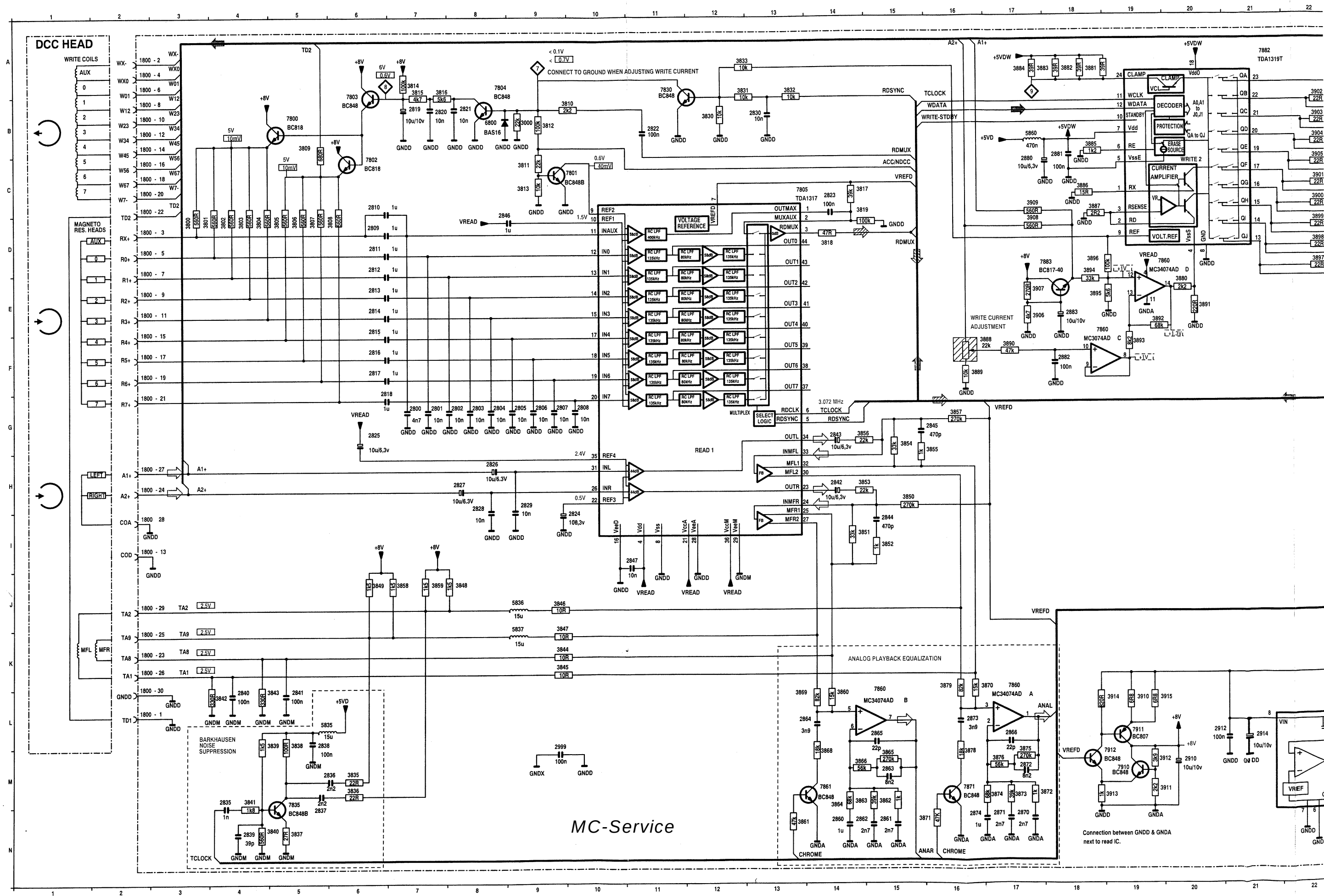
1 2 3 4

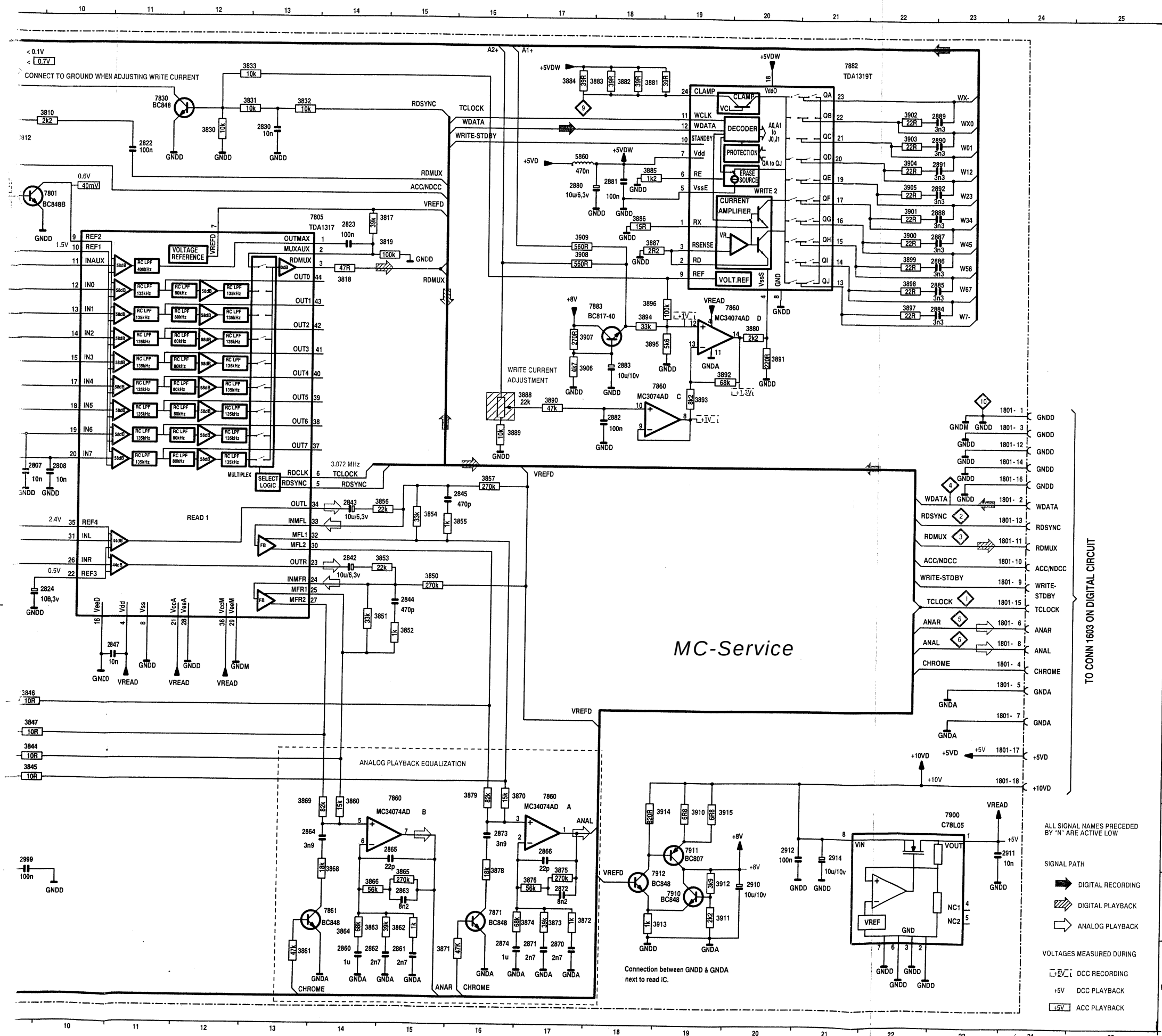


1 2 3 4

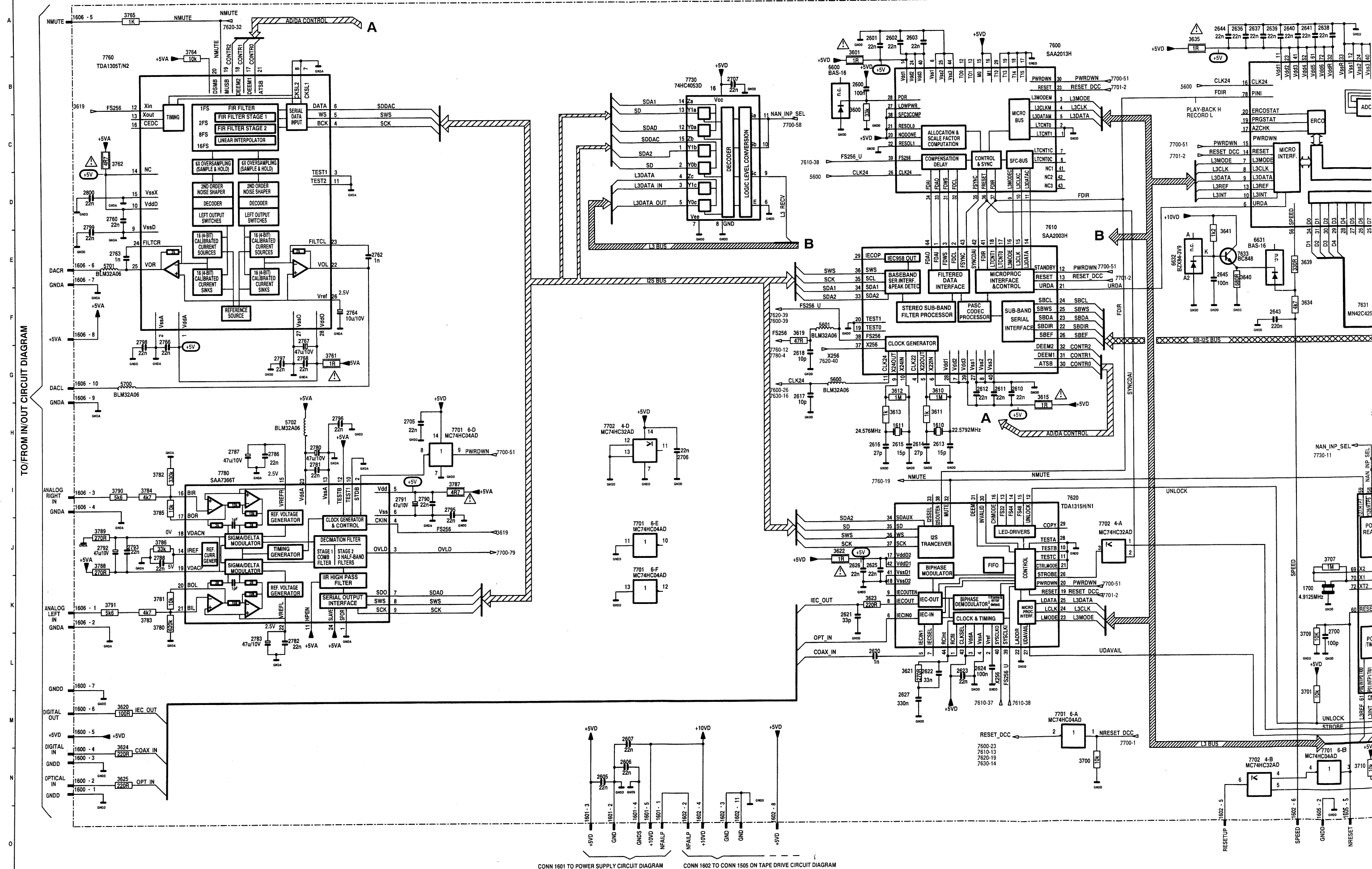


READ/WRITE CIRCUIT DIAGRAM

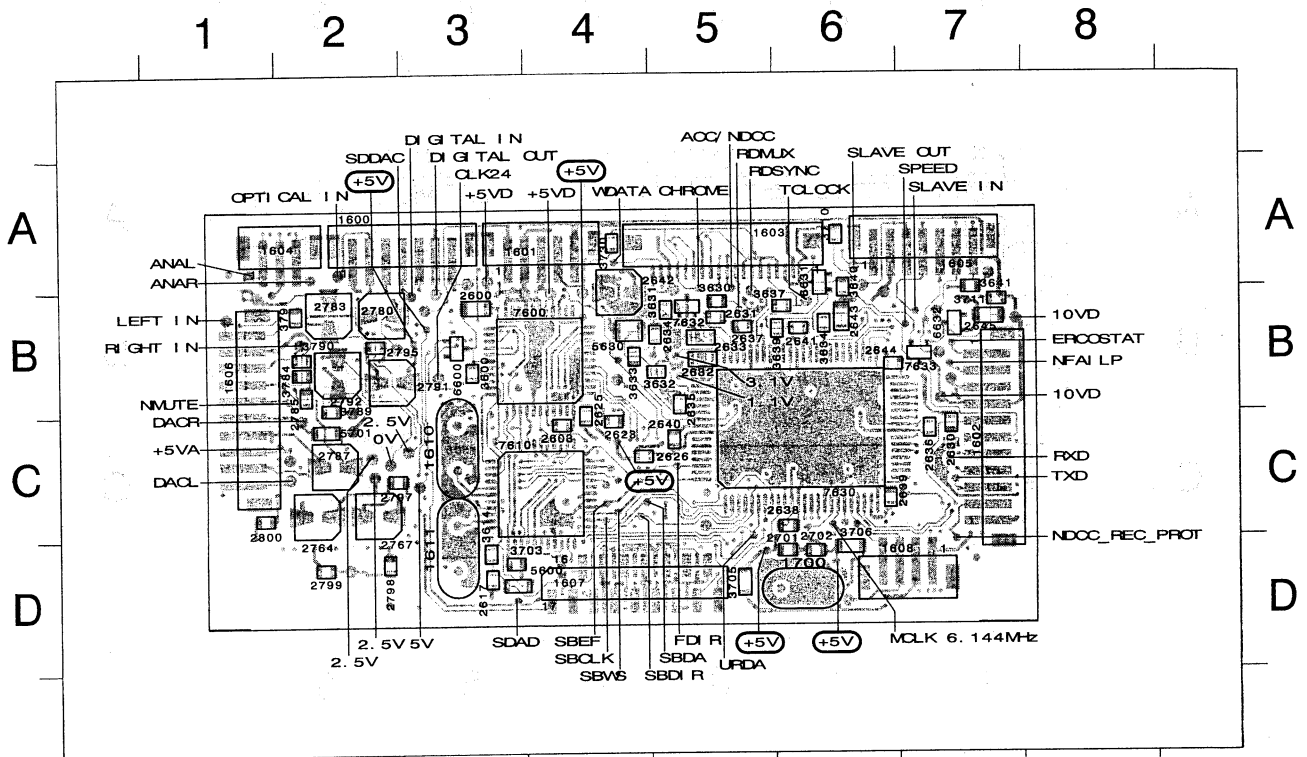




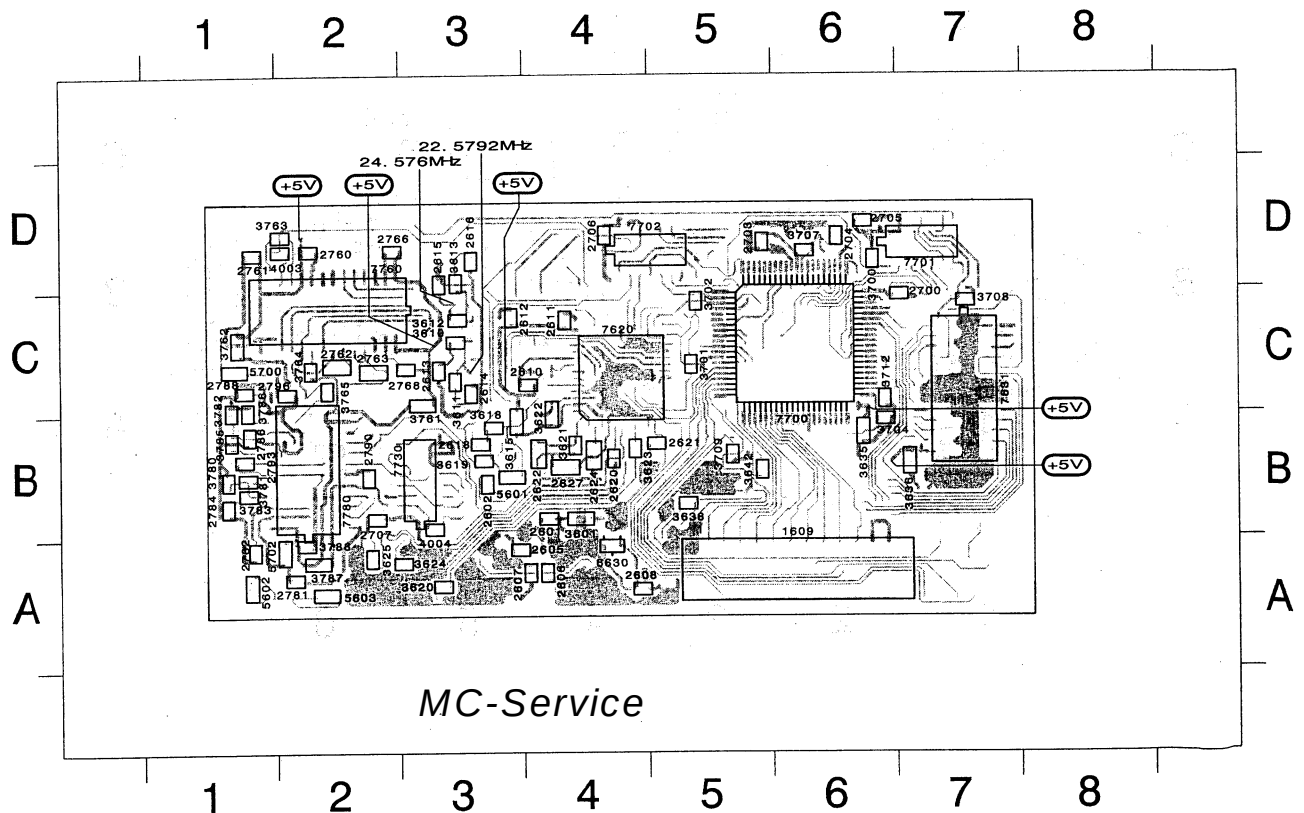
1800 L3	3844 K9
1800 A3	3845 K9
1800 D3	3846 J9
1800 A3	3847 K9
1800 D3	3848 J8
1800 A3	3849 J6
1800 D3	3850 H15
1800 B3	3851 H4
1800 C3	3852 I5
1800 B3	3853 H15
1800 C3	3854 G15
1800 B3	3855 H16
1800 C3	3856 G14
1800 B3	3857 G16
1800 C3	3858 J7
1800 B3	3859 J7
1800 C3	3860 L14
1800 B3	3861 N13
1800 C3	3862 M15
1800 B3	3863 M14
1800 C3	3864 N14
1800 B3	3865 M15
1800 C3	3866 M14
1800 B3	3867 M14
1800 C3	3868 L13
1800 B3	3869 L17
1800 C3	3870 N15
1800 B3	3871 M15
1800 C3	3872 M17
1800 B3	3873 M17
1800 C3	3874 M17
1800 B3	3875 M17
1800 C3	3876 M17
1800 B3	3877 M16
1800 C3	3878 M16
1800 B3	3879 M16
1800 C3	3880 E20
1800 B3	3881 A18
1800 C3	3882 A18
1800 B3	3883 A18
1800 C3	3884 A17
1800 B3	3885 B18
1800 C3	3886 C18
1800 B3	3887 C18
1800 C3	3888 F17
1800 B3	3889 F16
1800 C3	3890 F17
1800 B3	3891 E20
1800 C3	3892 E19
1800 B3	3893 F19
1800 C3	3894 E18
1800 B3	3895 E18
1800 C3	3896 D18
1800 B3	3897 D22
1800 C3	3898 D22
1800 B3	3899 D22
1800 C3	3900 C22
1800 B3	3901 C22
1800 C3	3902 B22
1800 B3	3903 B22
1800 C3	3904 B22
1800 B3	3905 C22
1800 C3	3906 E17
1800 B3	3907 E17
1800 C3	3908 D17
1800 B3	3909 D17
1800 C3	3910 L19
1800 B3	3911 M20
1800 C3	3912 M20
1800 B3	3913 M19
1800 C3	3914 L19
1800 B3	3915 L20
1800 C3	5835 L5
1800 B3	5836 J9
1800 C3	5837 K9
1800 B3	5838 B17
1800 C3	5839 B8
1800 B3	5840 B8
1800 C3	5841 B5
1800 B3	5842 C6
1800 C3	5843 B6
1800 B3	5844 A9
1800 C3	5845 C13
1800 B3	5846 A11
1800 C3	5847 M5
1800 B3	5848 L17
1800 C3	5849 L15
1800 B3	5850 F18
1800 C3	5851 D19
1800 B3	5852 M14
1800 C3	5853 M16
1800 B3	5854 A21
1800 C3	5855 D18
1800 B3	5856 L23
1800 C3	5857 M19
1800 B3	5858 L19
1800 C3	5859 M18
1800 B3	5860 B9
1800 C3	5861 D3
1800 B3	5862 D4
1800 C3	5863 D4
1800 B3	5864 D4
1800 C3	5865 D5
1800 B3	5866 D5
1800 C3	5867 D5
1800 B3	5868 D5
1800 C3	5869 B5
1800 B3	5870 B10
1800 C3	5871 C9
1800 B3	5872 B9
1800 C3	5873 C9
1800 B3	5874 A7
1800 C3	5875 A7
1800 B3	5876 A7
1800 C3	5877 C14
1800 B3	5878 D14
1800 C3	5879 C12
1800 B3	5880 B12
1800 C3	5881 A12
1800 B3	5882 A13
1800 C3	5883 A12
1800 B3	5884 M6
1800 C3	5885 M6
1800 B3	5886 N5
1800 C3	5887 N5
1800 B3	5888 L5
1800 C3	5889 L5
1800 B3	5890 N5
1800 C3	5891 M4
1800 B3	5892 L4
1800 C3	5893 L5



DIGITAL PANEL													
1600 A 3	1607 D 4	2617 D 3	2633 B 5	2640 C 5	2702 D 6	2791 B 2	3600 B 3	3637 B 6	3710 A 6	5600 D 3	7610 C 4		
1601 A 4	1608 D 7	2623 C 4	2634 B 5	2641 B 6	2764 C 2	2792 B 2	3614 D 3	3639 B 6	3711 B 7	5630 B 4	7630 C 6		
1602 C 7	1610 C 3	2625 C 4	2635 B 5	2642 B 4	2767 C 2	2795 B 2	3630 B 5	3640 B 6	3730 A 4	5701 C 2	7632 B 5		
1603 A 5	1611 D 3	2626 C 4	2636 C 7	2643 B 6	2780 B 2	2797 C 2	3631 B 5	3641 D 7	3784 B 2	6600 B 3	7633 B 7		
1604 A 2	1700 D 6	2630 C 7	2637 B 5	2644 B 6	2783 B 2	2798 D 2	3632 B 5	3703 D 3	3789 B 2	6631 A 6			
1605 A 7	2600 B 3	2631 B 5	2638 C 6	2645 B 7	2785 B 2	2799 D 2	3633 B 4	3705 D 5	3790 B 2	6632 B 7			
1606 B 1	2603 C 4	2632 B 5	2639 C 6	2701 D 6	2787 C 2	2800 C 1	3634 B 6	3706 D 6	3791 B 2	7600 B 4			



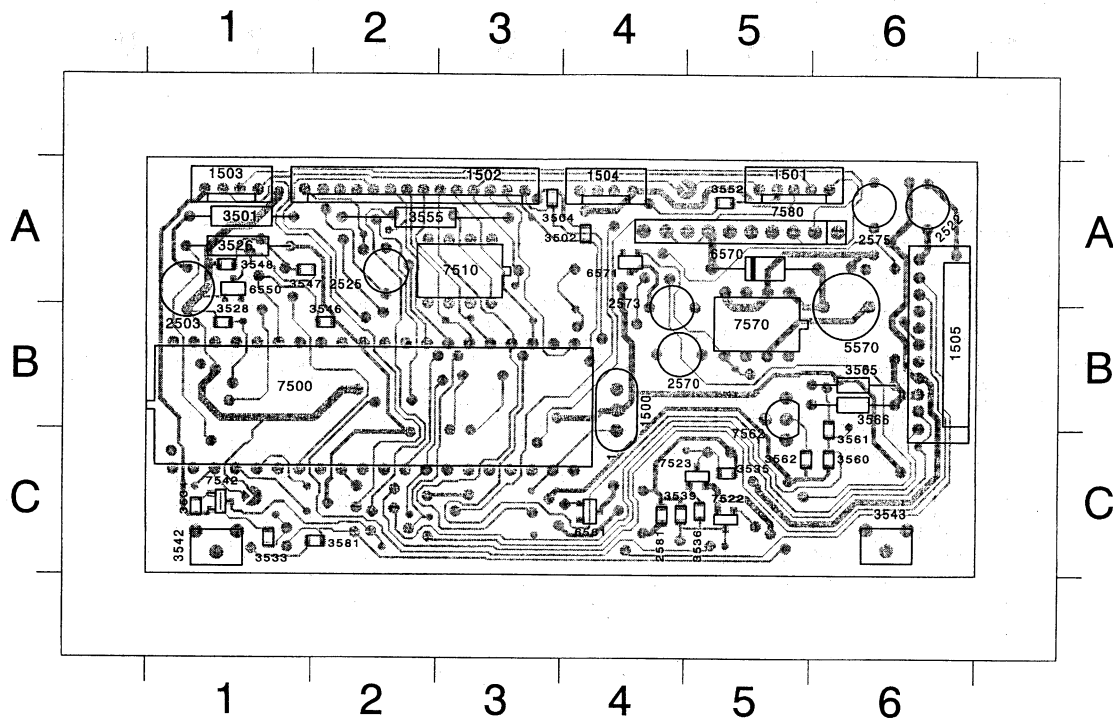
1609	B 6	2611	C 4	2621	B 5	2706	D 4	2781	A 2	3601	B 4	3620	A 3	3638	B 5	3709	B 5	3781	B 1	4004	B 3	7631	C 7
2601	B 4	2612	C 3	2622	B 4	2707	B 2	2782	A 1	3610	C 3	3621	B 4	3642	B 5	3712	C 6	3782	C 1	5601	B 3	7700	C 6
2602	B 3	2613	C 3	2624	B 4	2760	D 2	2784	B 1	3611	C 3	3622	B 4	3700	D 6	3761	C 3	3783	B 1	5602	A 1	7701	D 7
2605	A 3	2614	C 3	2627	B 4	2761	D 1	2786	B 1	3612	C 3	3623	B 4	3701	C 5	3762	C 1	3785	B 1	5603	A 2	7702	D 5
2606	A 4	2615	D 3	2700	C 7	2762	C 2	2788	C 1	3613	D 3	3624	A 3	3702	C 5	3763	D 2	3786	C 1	5700	C 1	7730	B 3
2607	A 4	2616	D 3	2703	D 5	2763	C 2	2790	B 2	3615	B 3	3625	A 2	3704	B 6	3764	C 2	3787	A 2	5702	A 2	7760	C 2
2608	A 4	2618	B 3	2704	D 6	2766	D 2	2793	B 1	3618	B 3	3635	B 6	3707	D 6	3765	C 2	3788	A 2	6630	A 4	7780	B 2
2610	C 4	2620	B 4	2705	D 6	2768	C 3	2796	C 2	3619	B 3	3636	B 7	3708	C 7	3780	B 1	4003	D 2	7620	C 4		



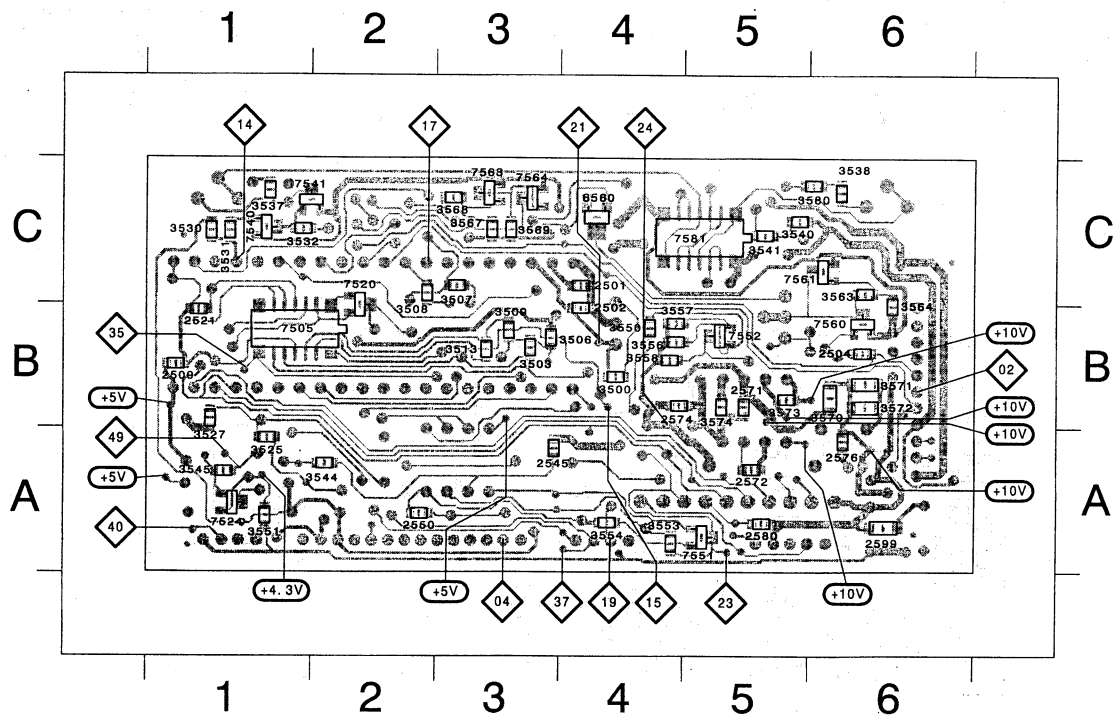
TAPE DRIVE CONTROL PANEL

8-14

1500 B 4	1505 B 6	2573 B 4	3504 A 3	3535 C 5	3546 B 2	3560 C 6	3581 C 2	6571 A 4	7542 C 1
1501 A 5	2503 A 1	2575 A 6	3526 A 1	3536 C 5	3547 A 1	3561 B 6	5570 B 6	7500 B 2	7562 B 5
1502 A 2	2522 A 6	2581 C 4	3528 B 1	3539 C 4	3548 A 1	3562 C 5	6550 A 1	7510 A 3	7570 B 5
1503 A 1	2525 A 2	3501 A 1	3533 C 1	3542 C 1	3552 A 5	3565 B 6	6561 C 4	7522 C 5	7580 A 5
1504 A 4	2570 B 4	3502 A 4	3534 C 1	3543 C 6	3555 A 2	3566 B 6	6570 A 5	7523 C 5	



2500 B 1	2571 B 5	3503 B 3	3527 B 1	3541 C 5	3556 B 4	3569 C 3	6560 C 4	7552 B 5
2501 C 4	2572 A 5	3506 B 3	3530 C 1	3544 A 2	3557 B 4	3570 B 6	7505 B 1	7560 B 6
2502 B 4	2574 B 4	3507 C 3	3531 C 1	3545 A 1	3558 B 4	3571 B 6	7520 B 2	7561 C 6
2504 B 6	2576 A 6	3508 C 2	3532 C 1	3550 B 4	3563 C 6	3572 B 6	7524 A 1	7563 C 3
2521 B 1	2580 A 5	3509 B 3	3537 C 1	3551 A 1	3564 B 6	3573 B 5	7540 C 1	7564 C 3
2545 A 3	2599 A 6	3513 B 3	3538 C 6	3553 A 4	3567 C 3	3574 B 5	7541 C 1	7581 C 5
2550 A 2	3500 B 4	3525 A 1	3540 C 5	3554 A 4	3568 C 3	3580 C 6	7551 A 5	



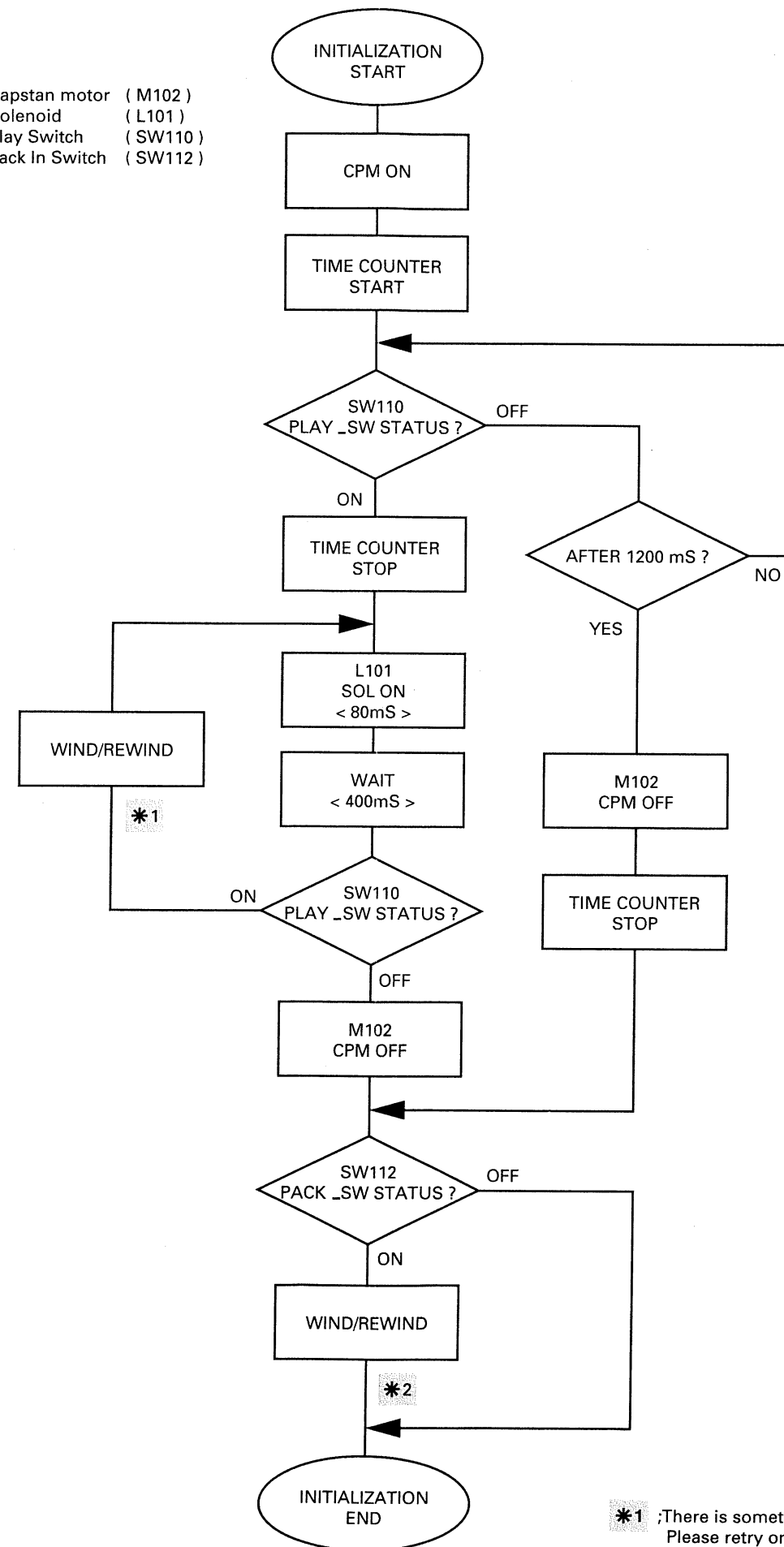
MC-Service

FLOW CHART TAPE DECK TIMING

LEGEND

< SYMBOLS >

CPM ; Capstan motor (M102)
 SOL ; Solenoid (L101)
 PLAY_SW ; Play Switch (SW110)
 PACK_SW ; Pack In Switch (SW112)



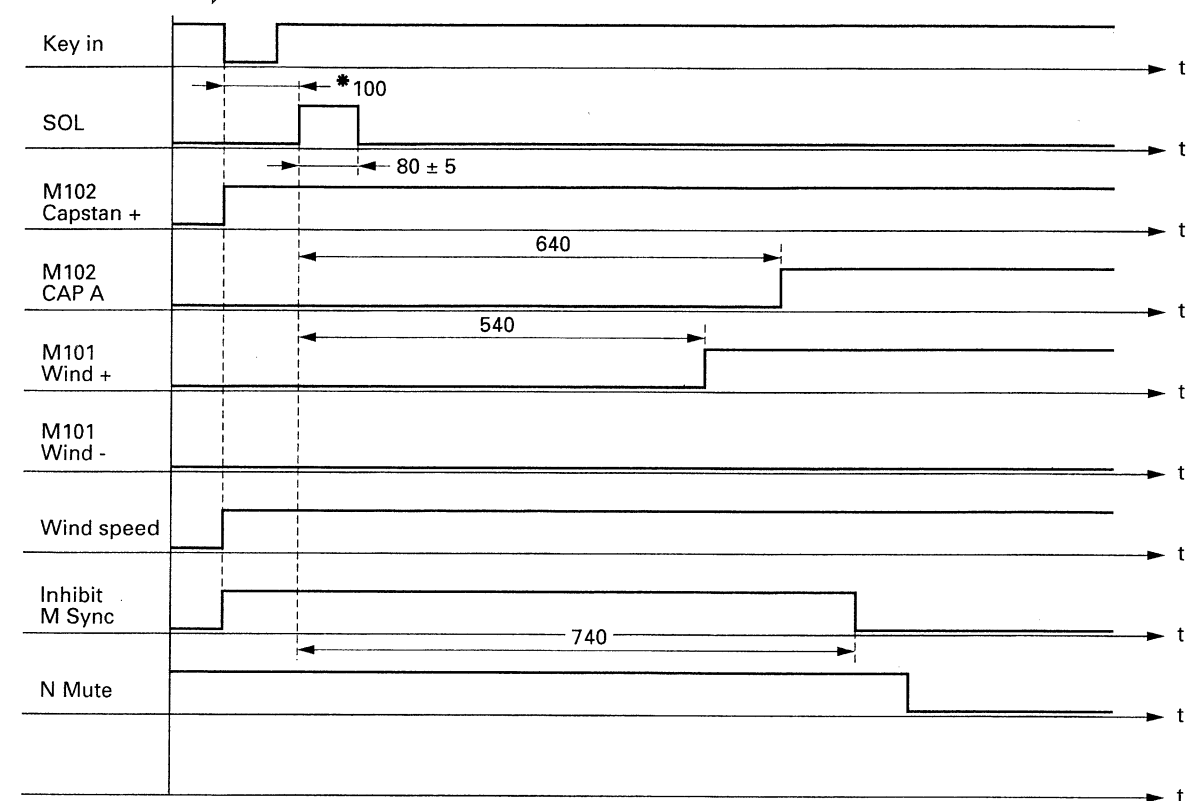
*1 ;There is something wrong.
Please retry only one time.

*2 ;Please remove the slack of tape.

TAPE DECK TIMING CHARTS

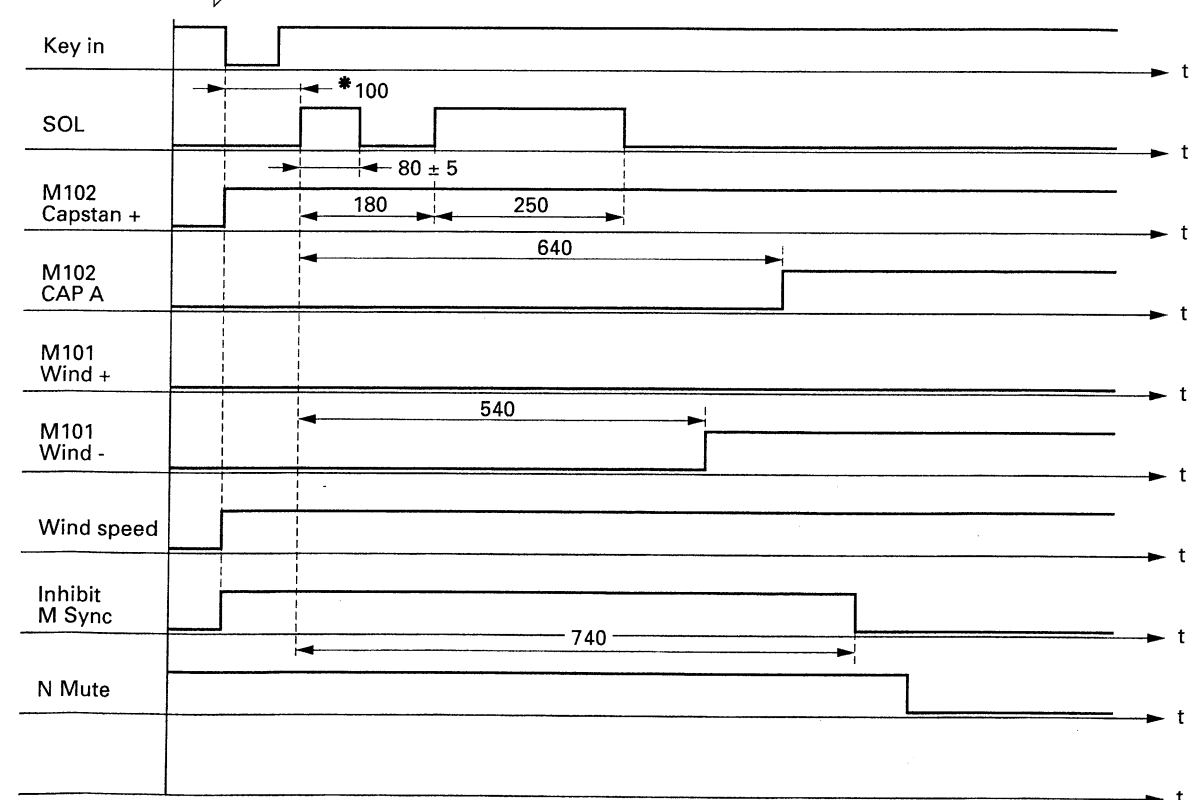
TAPE DECK TIMING CHART 1

Stop/Pause → Forward Play (Rec)



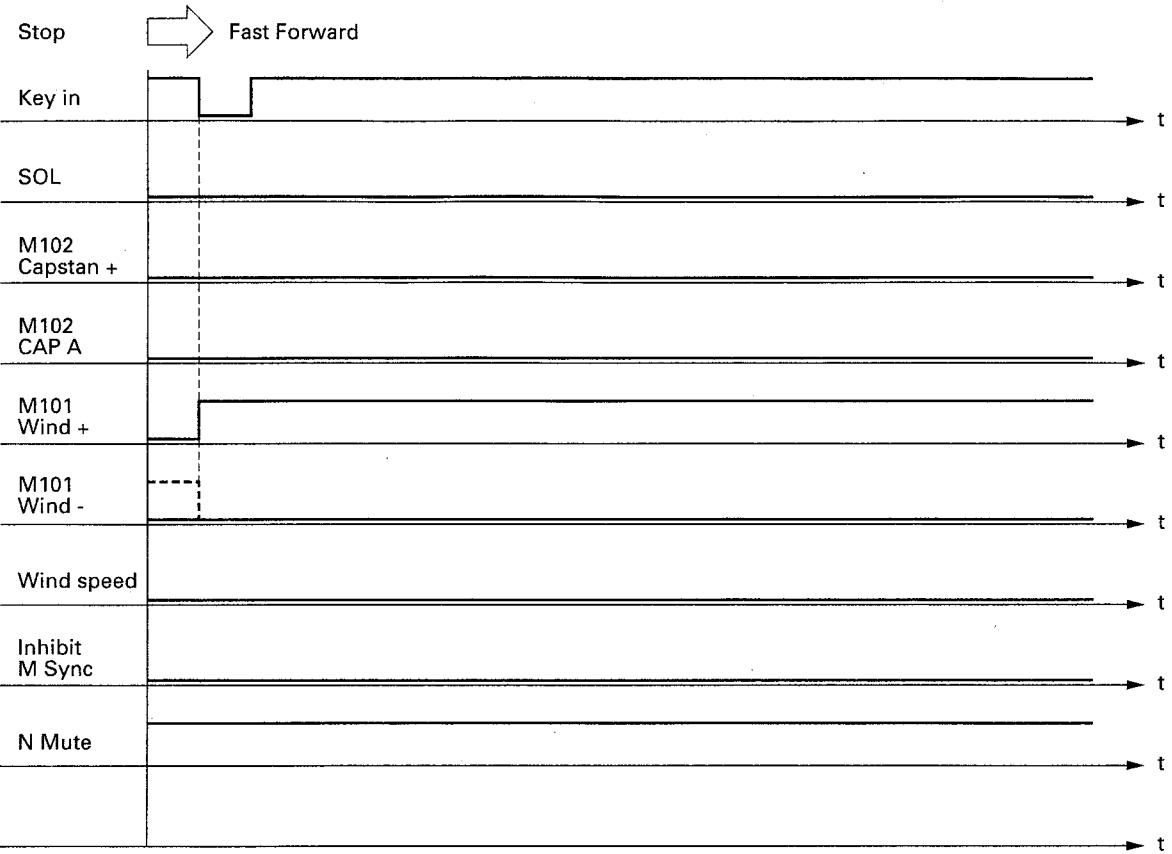
TAPE DECK TIMING CHART 2

Stop/Pause → Reverse Play (Rec)

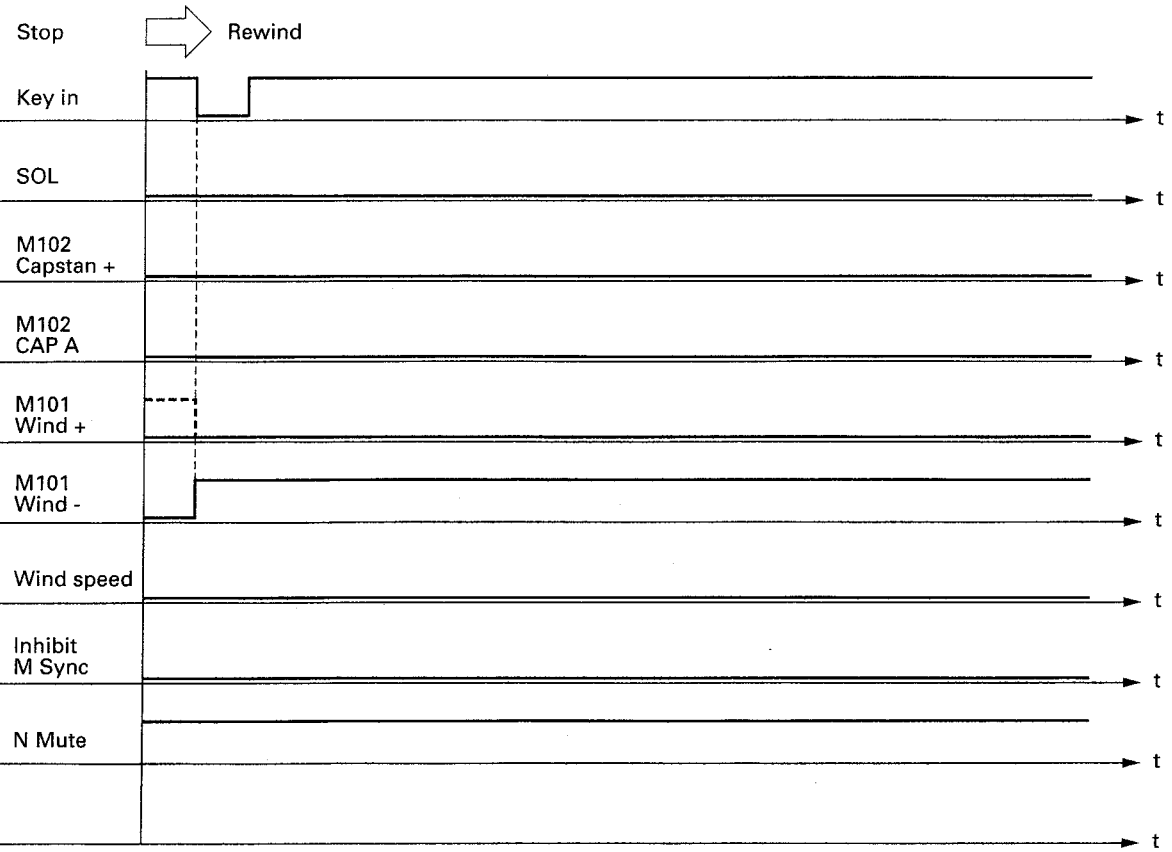


* This timing is the data when mold flywheels are used.
Please change to more than 150 mS at Zn-diecasting or sinterd flywheels.

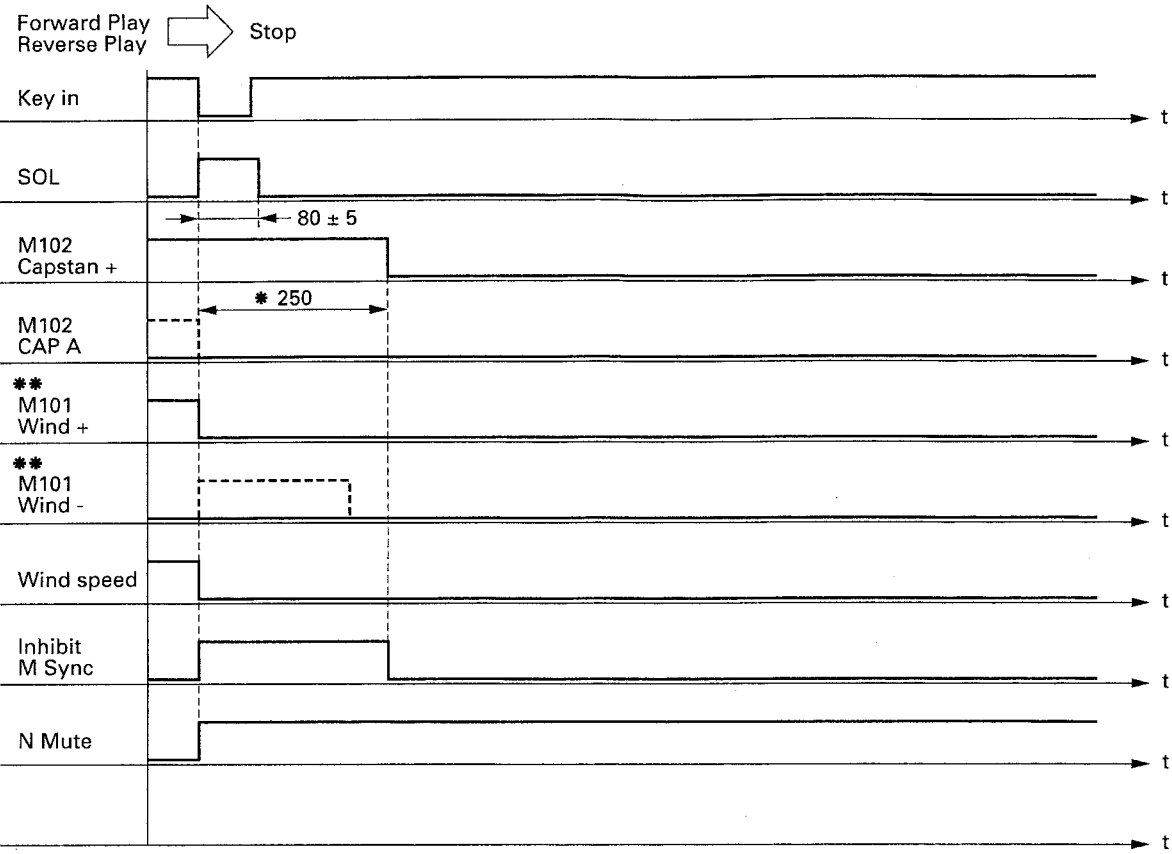
TAPE DECK TIMING CHART 3



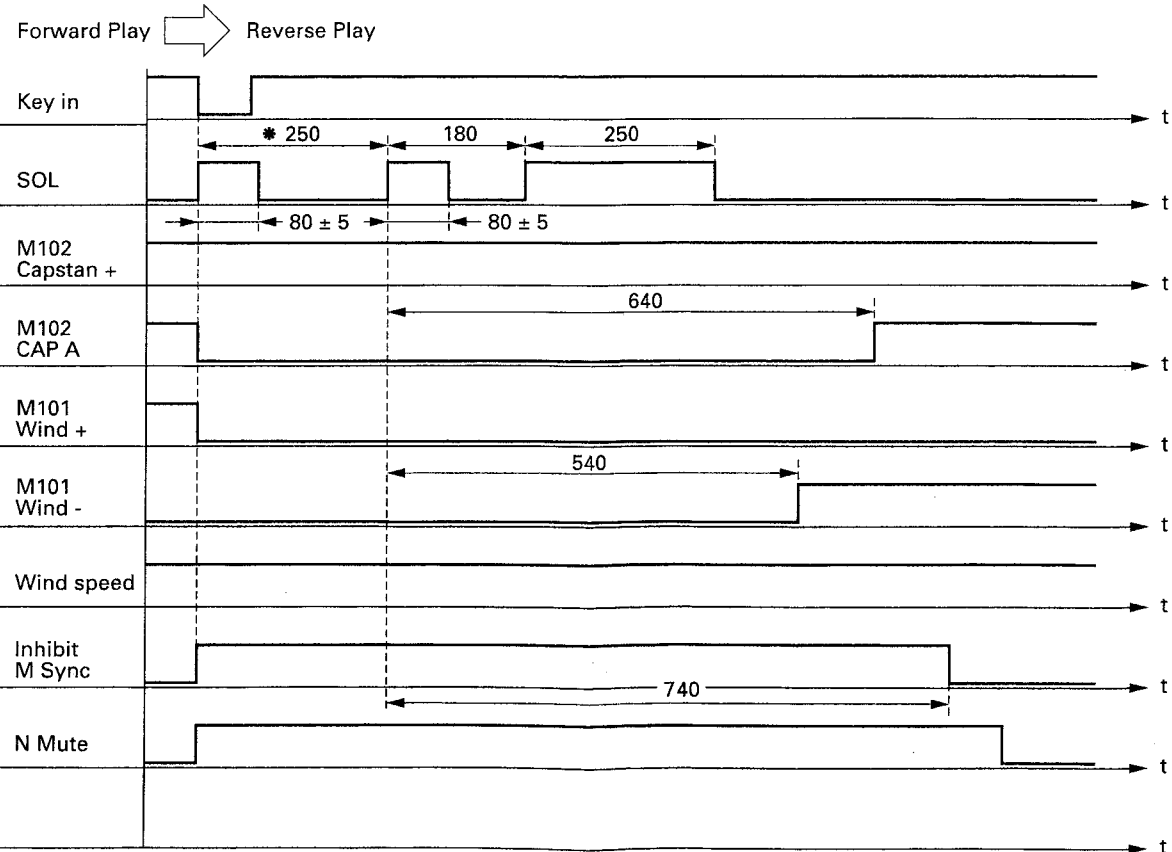
TAPE DECK TIMING CHART 4



TAPE DECK TIMING CHART 5



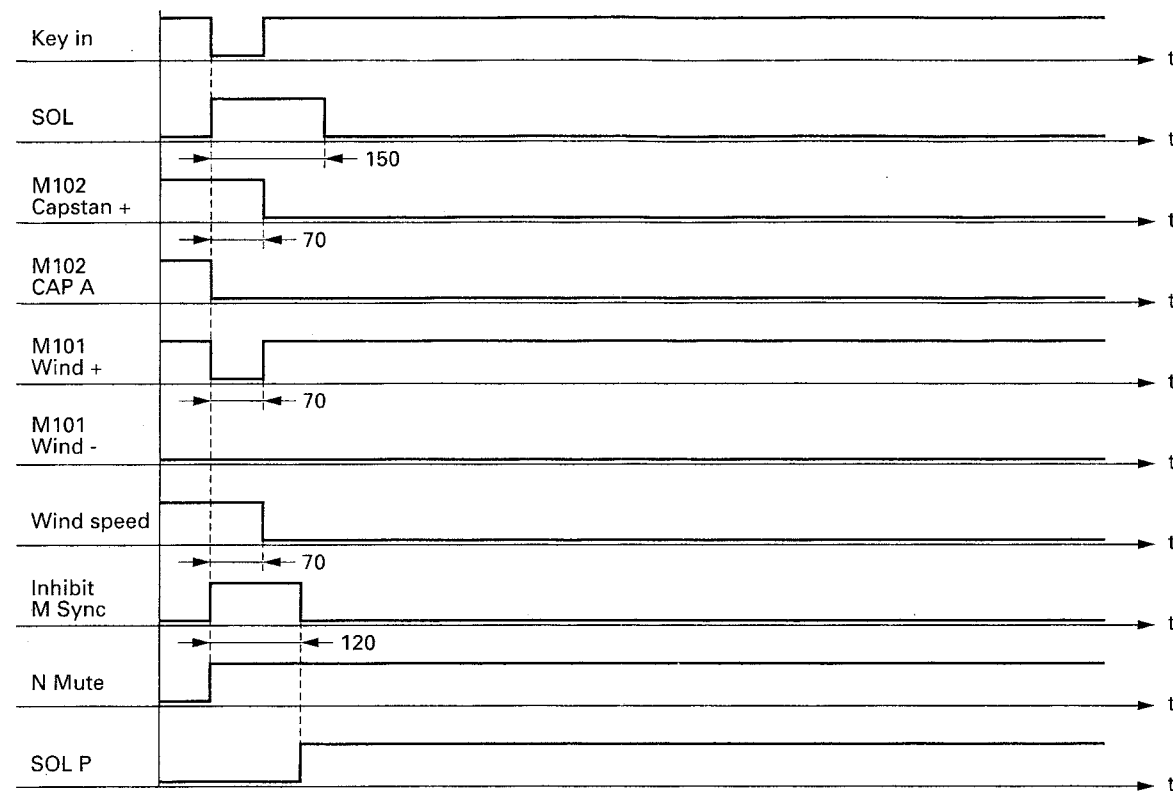
TAPE DECK TIMING CHART 6



* Please change 250mS to 400mS at double speed PLAY mode.
** Interchange M101 Wind + and M101 Wind - timing at REVERSE PLAY mode.

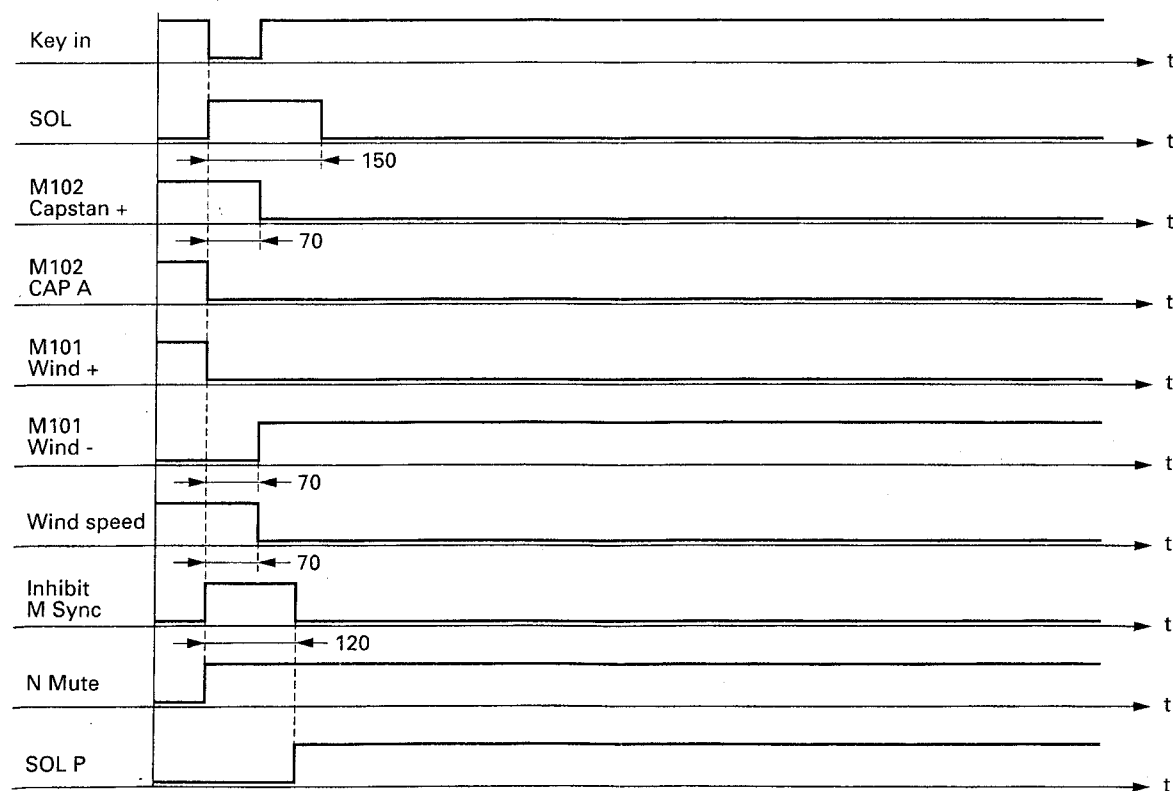
TAPE DECK TIMING CHART 7

Forward Play → "A"Head Fast Forward-Search



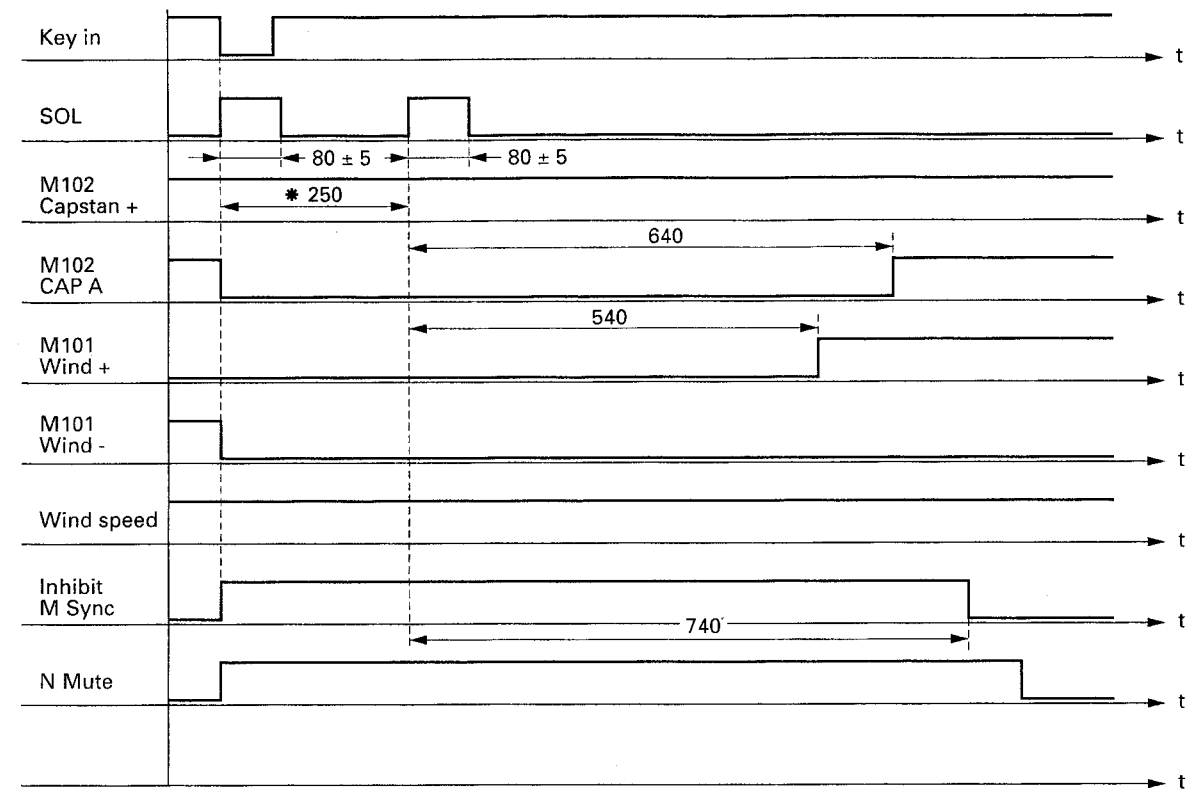
TAPE DECK TIMING CHART 8

Forward Play → "A"Head Rewind-Search



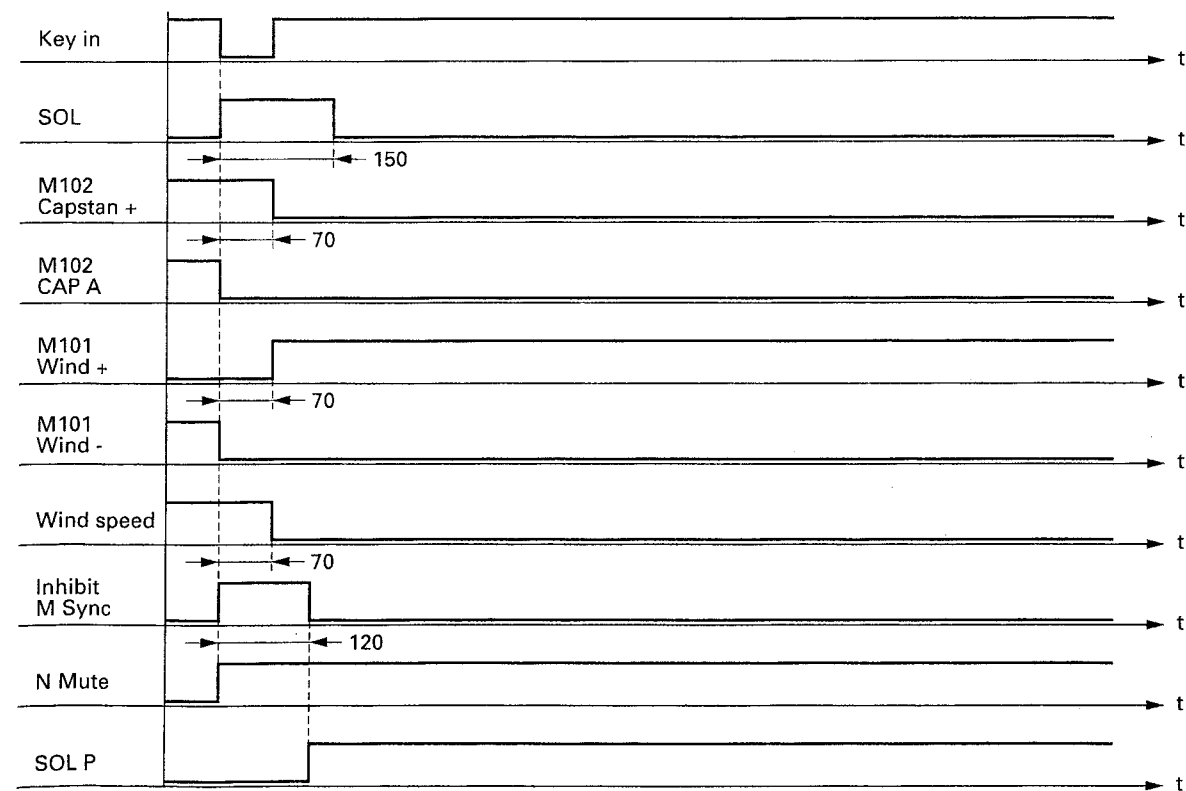
TAPE DECK TIMING CHART 9

Reverse Play → Forward Play



TAPE DECK TIMING CHART 10

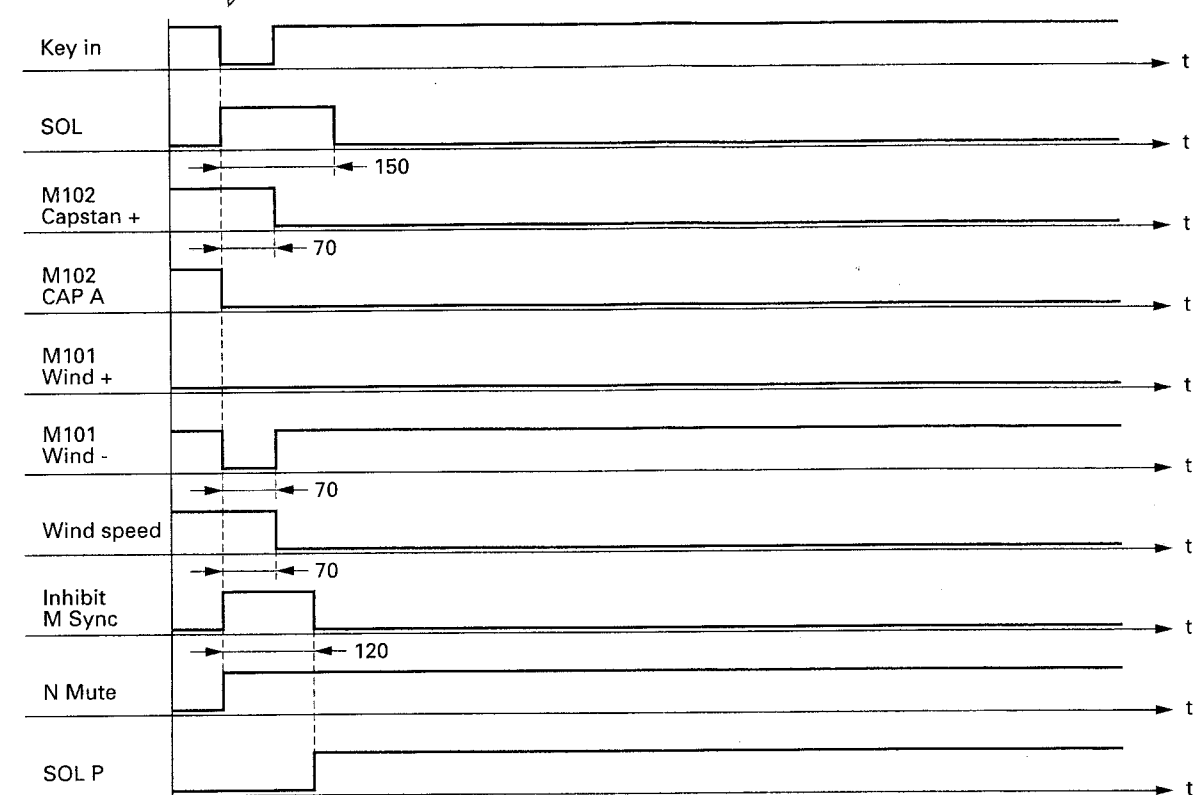
Reverse Play → "B" Head Fast Forward-Search



* Please change 250mS to 400mS at double speed PLAY mode.

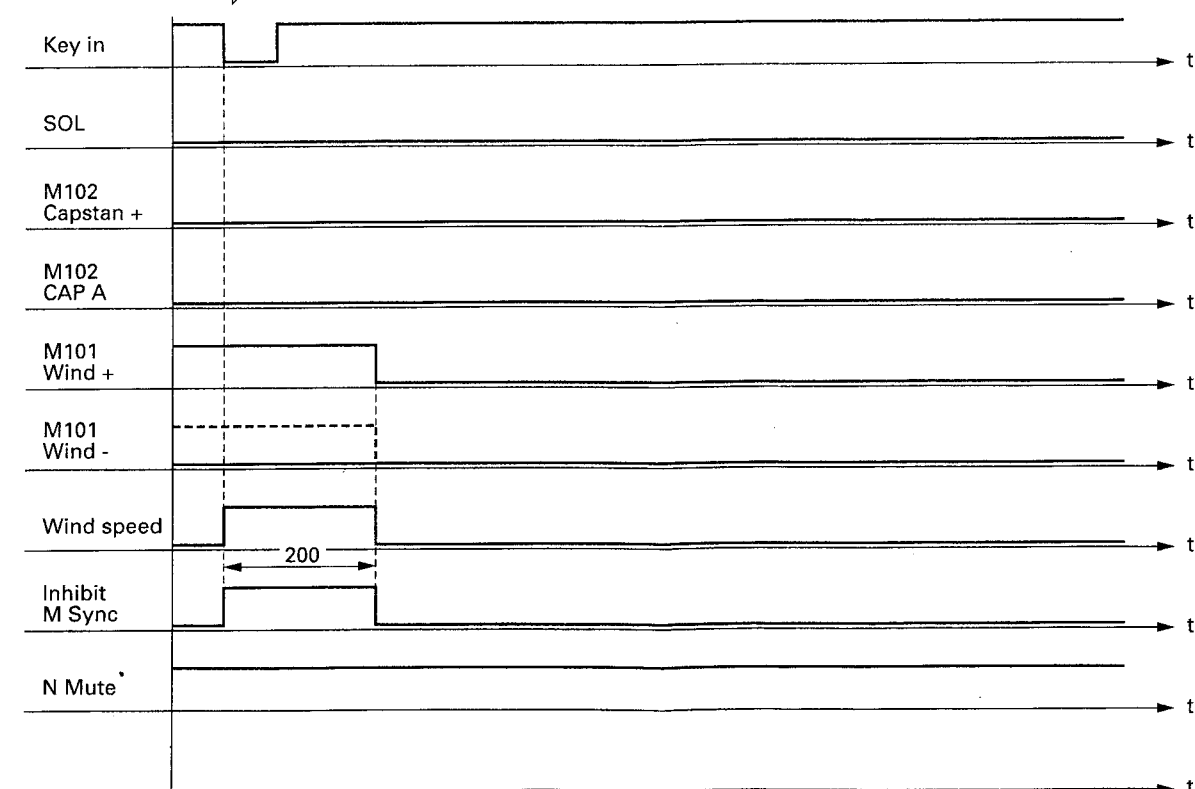
TAPE DECK TIMING CHART 11

Reverse Play → "B" Head Rewind-Search



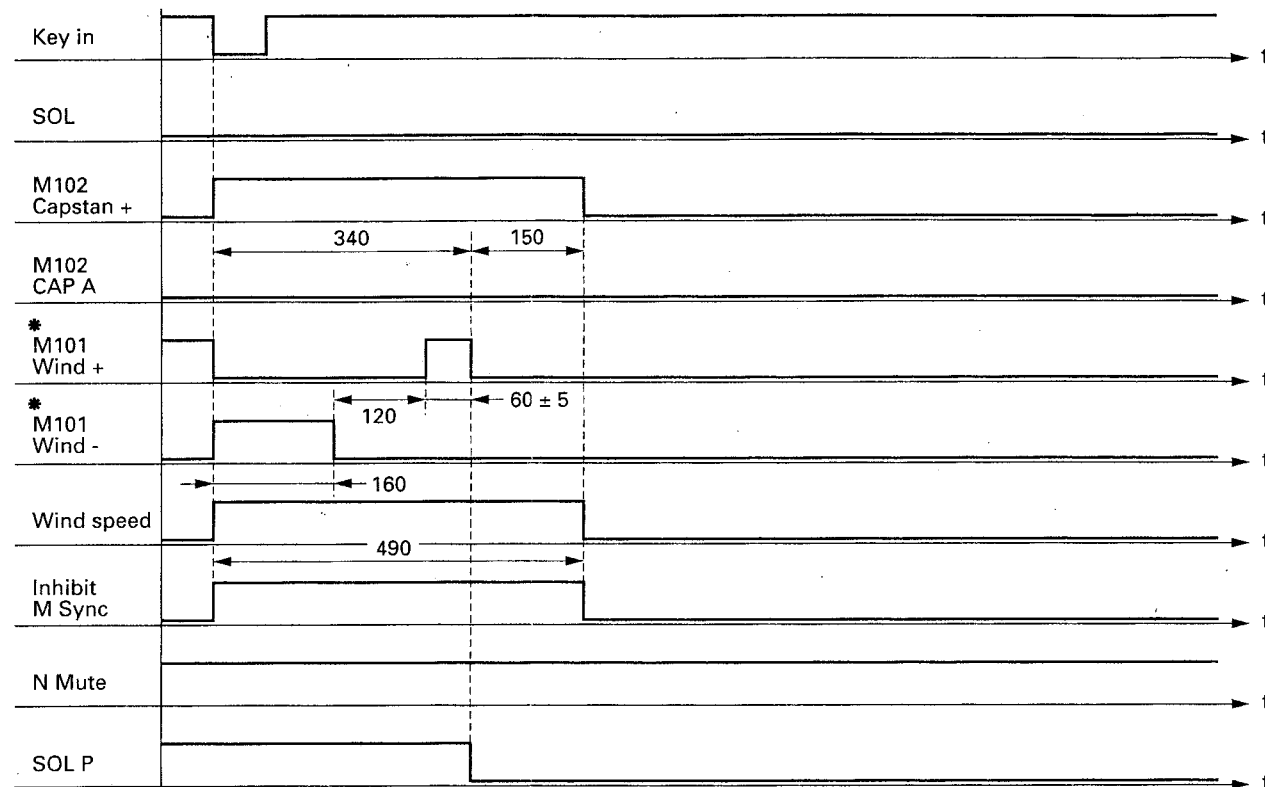
TAPE DECK TIMING CHART 12

Fast Forward (Rev.) → Stop



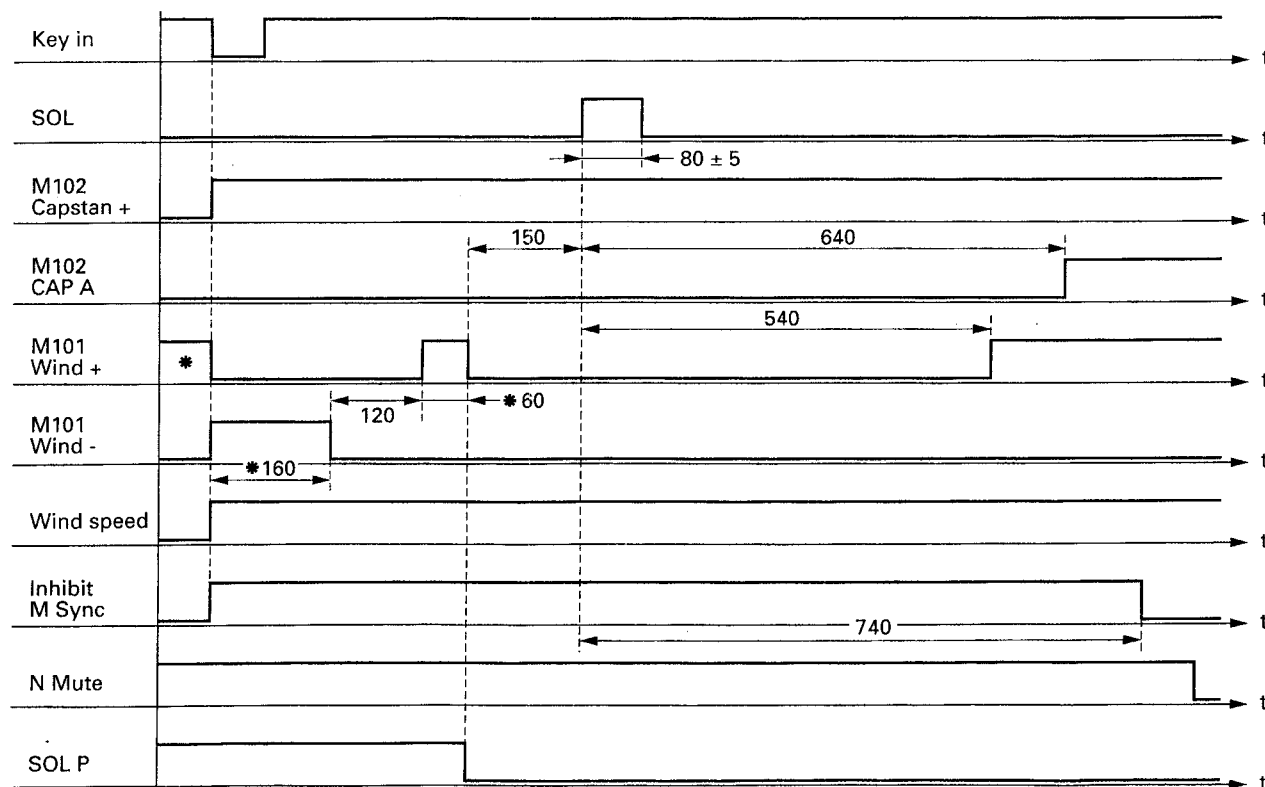
TAPE DECK TIMING CHART 13

Fast Forward-Search (Rew.) → Stop



TAPE DECK TIMING CHART 14

Fast Forward-Search (Rew.) → Forward Play (Rec)

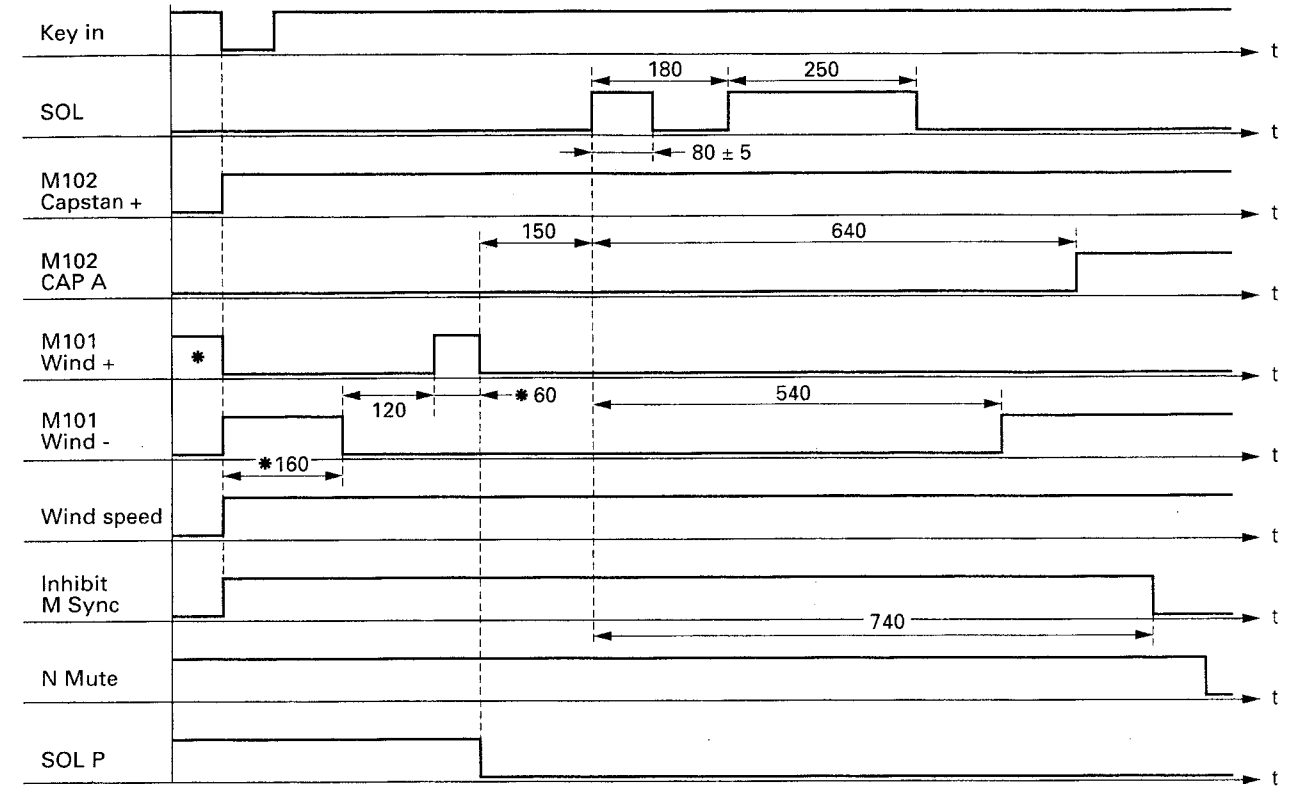


* Interchange M101 Wind + and M101 Wind - timing at Rewind-Search mode.

SBP0186

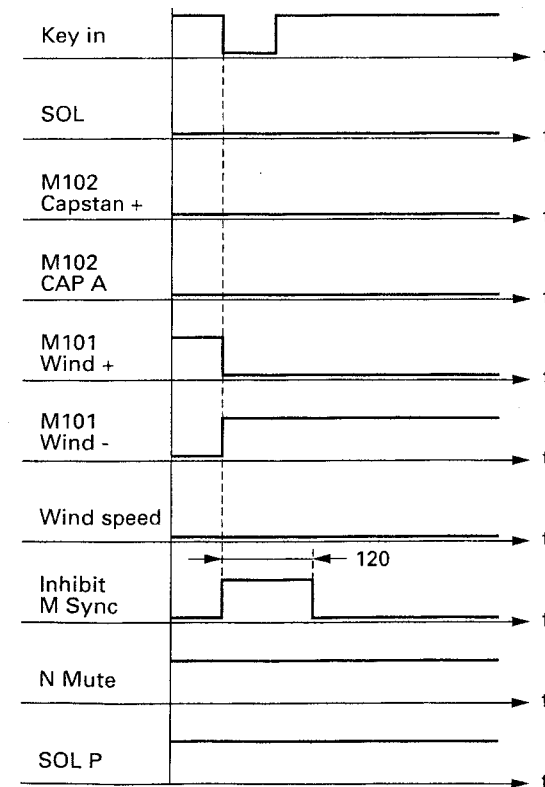
TAPE DECK TIMING CHART 15

Fast Forward-Search (Rew.) → Reverse Play



TAPE DECK TIMING CHART 16

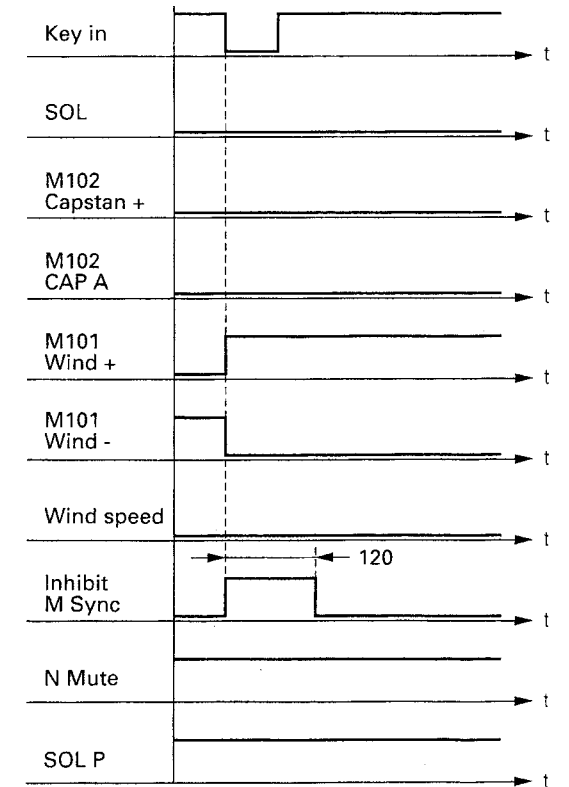
Fast Forward-Search (Rew.) → Rewind-Search



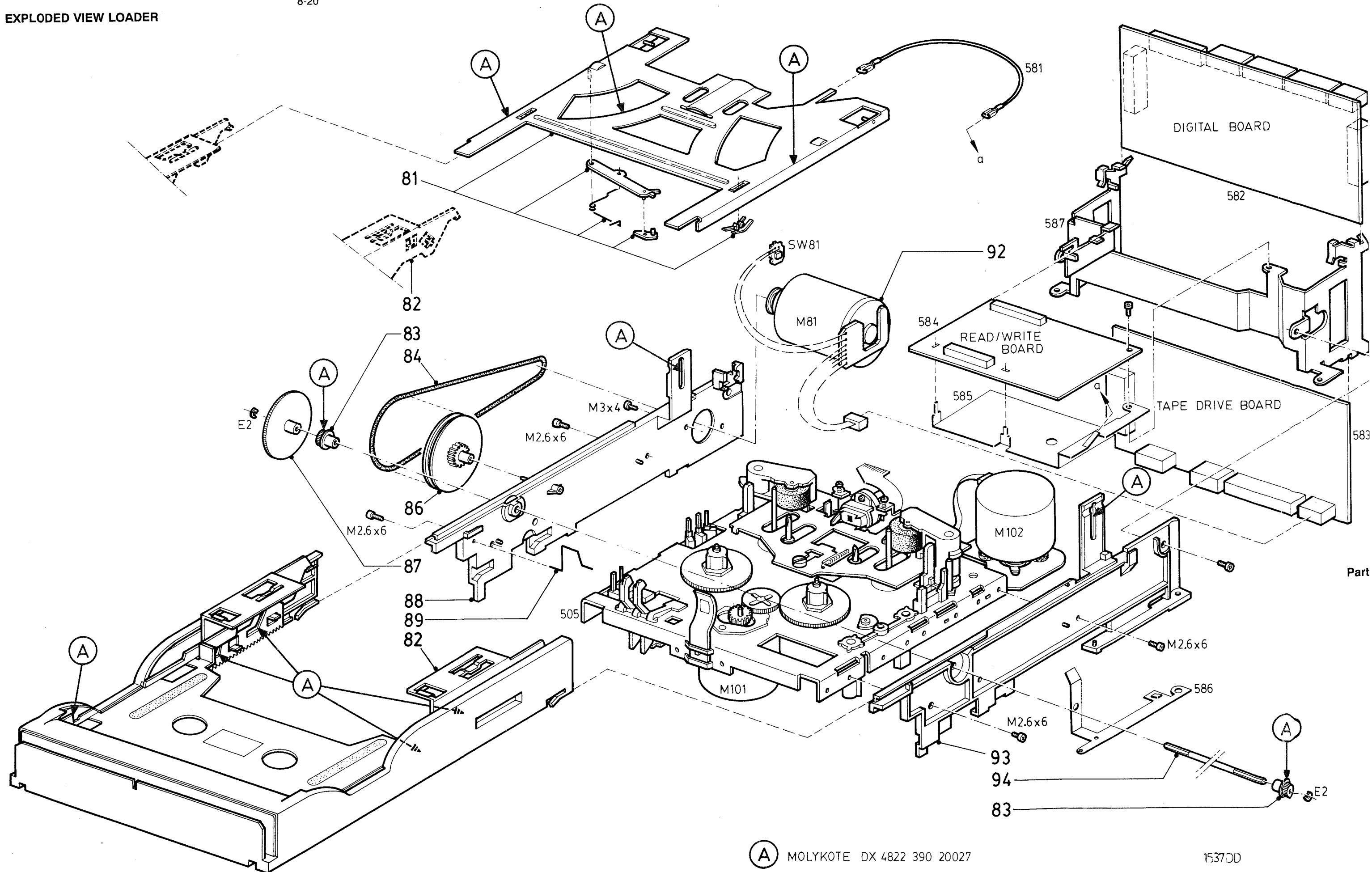
* Interchange M101 Wind + and M101 Wind - timing at Rewind-Search mode.

TAPE DECK TIMING CHART 17

Rewind-Search → Fast Forward-Search (Rew.)



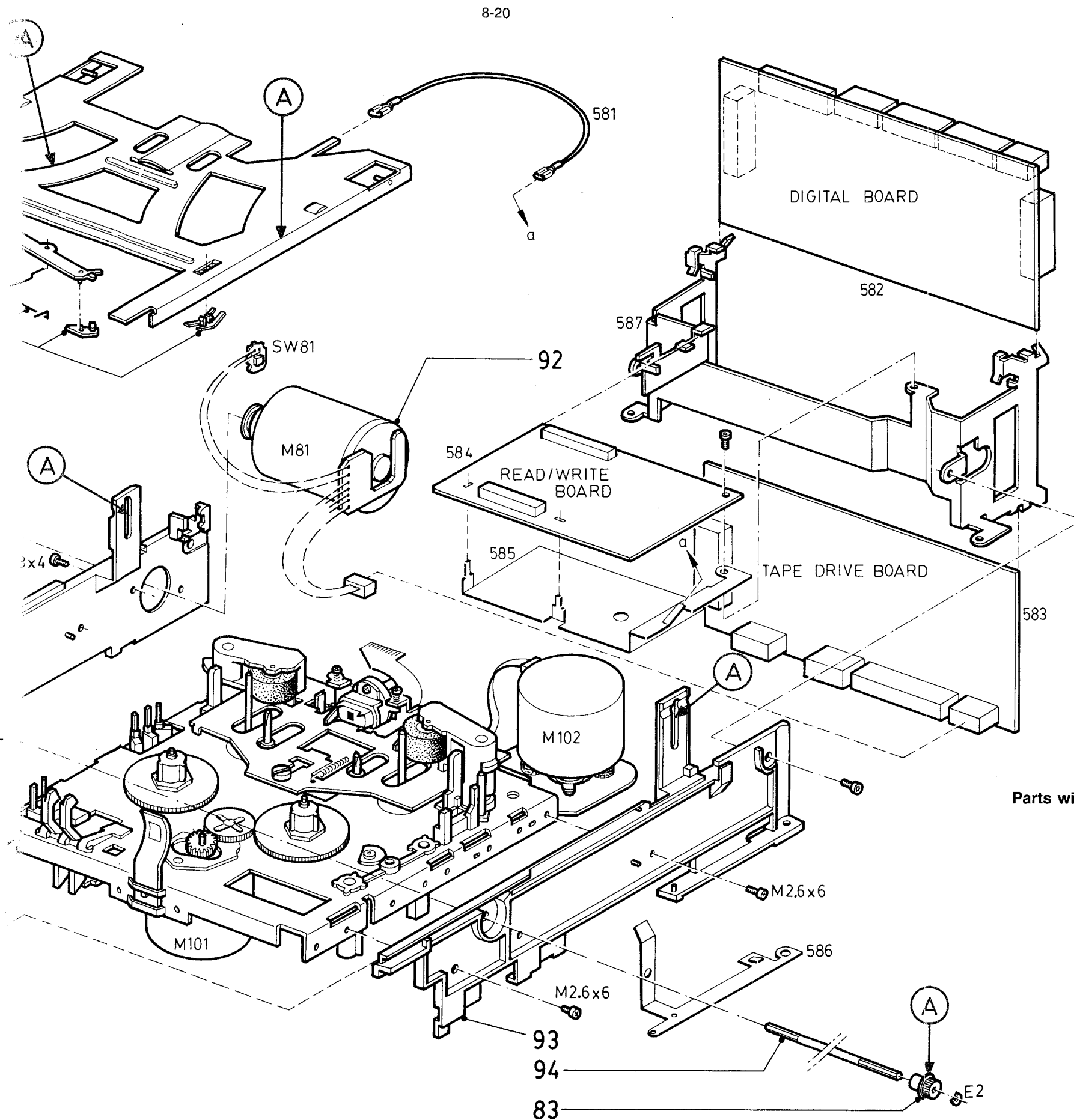
EXPLODED VIEW LOADER



Ⓐ MOLYKOTE DX 4822 390 20027

1537 DD

MC-Service



MECHANICAL PARTS LIST LOADER

81	4822 444 30481	CLAMPER ASSY
82	4822 444 30479	TRAY ASSY
83	4822 522 33448	SYNCH. GEAR WHEELS
84	4822 358 31294	BELT TRAY LOADING
86	4822 528 90882	DRIVE GEAR WHEEL
87	4822 528 90881	GEAR PULLEY
88	4822 256 92147	TRAY PLATE HOLDER LEFT
89	4822 403 71172	SWITCH LEVER (SPRING)
92	4822 361 21706	TRAY MOTOR ASSY
93	4822 256 92146	TRAY PLATE HOLDER RIGHT
94	4822 535 93455	DRIVE SHAFT
SW81	4822 271 30822	TRAY SWITCH

Parts with position number 5xx are only available during production period on special request.

EXPLODED VIEW TAPE DECK

EXPLODED VIEW TAPE DECK

8-21

101
102
103
104
105
106
2.6x0.25
107
108
109
111
112
113
114
116
M2.6x6
M2.6x3.5
503
A
E1.65
2.6x0.5
A
SW104
SW103
SW102
SW101
SW110
SW111
SW112
506
507
508
M101
M2.6x6
A
MOLYKOTE DX 4822 390 20027

MC-Service

8-21

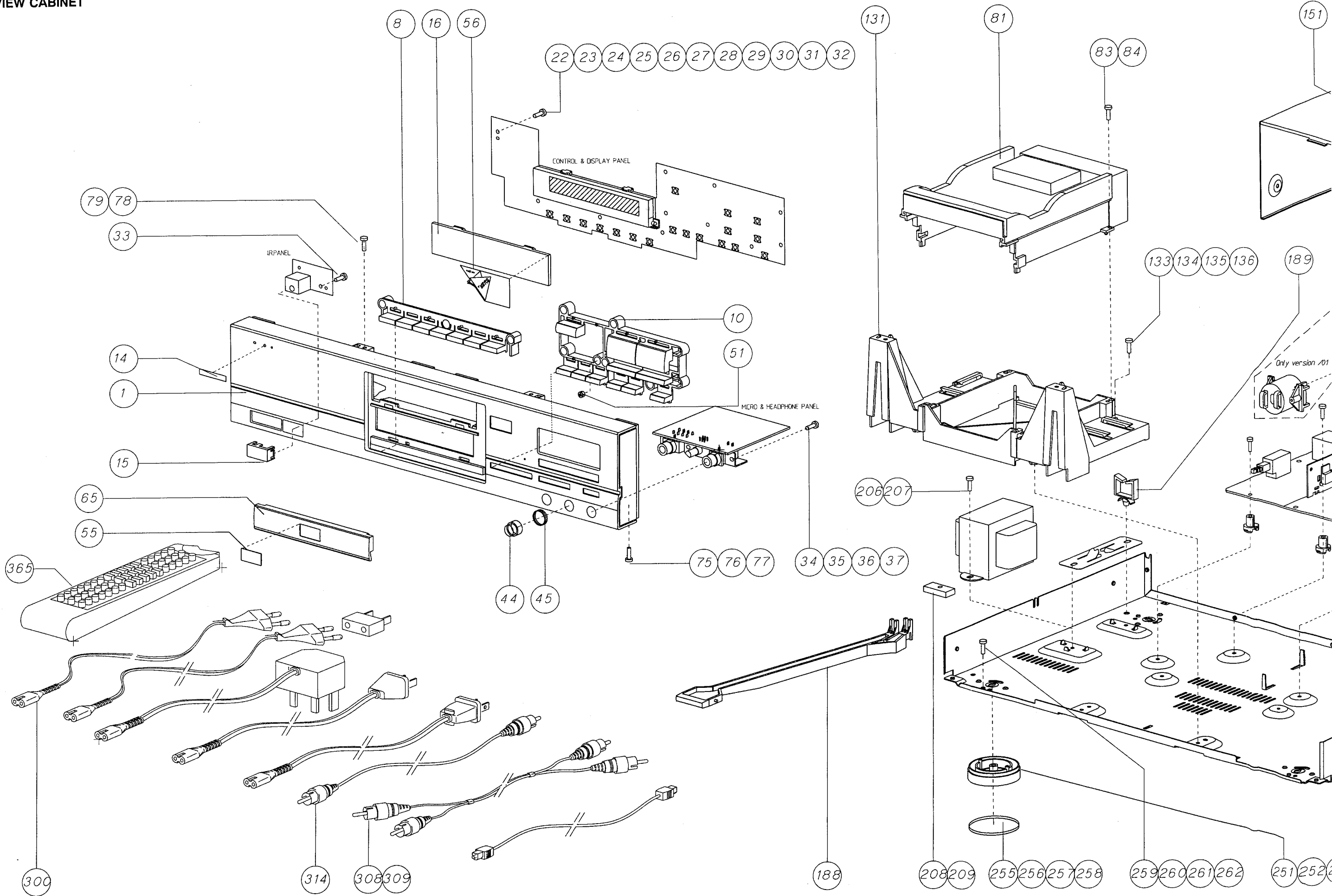


PCS 60 863

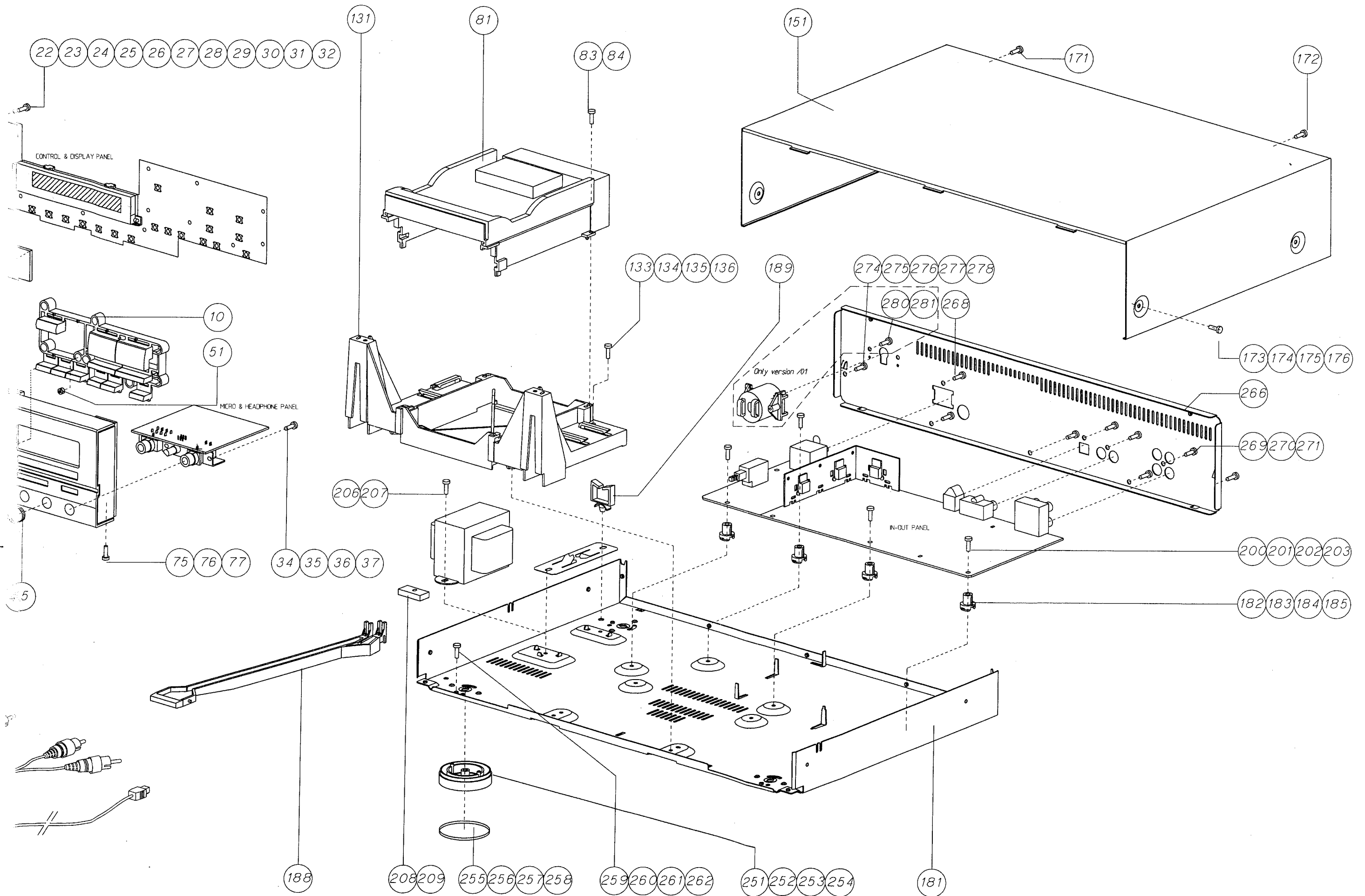
EXPLODED VIEW CABINET

9-1

9-1



MC-Service



ELECTRICAL PARTS LIST

IN/OUT PANEL					
MISCELLANEOUS					
▲	4822 492 63076	CLAMPING SPRING	2205	4822 124 41525	100μF 20% 25V
1005	4822 267 31823	ANALOG IN/OUT SOCKET	2206	4822 126 11585	22nF +80-20% 25V
1100	4822 267 31448	DIGITAL IN/OUT SOCKET	2207	4822 124 41525	100μF 20% 25V
1102	4822 212 23837	OPTICAL INPUT			
1905	▲ 4822 071 58001	RADIAL FUSE T 800mA	2208	4822 122 33849	150pF 10%Y5P 50V
			2209	4822 122 33195	100pF 10% 50V
1906	▲ 4822 071 58001	RADIAL FUSE T 800mA	2210	4822 122 33849	150pF 10%Y5P 50V
1920	▲ 4822 071 52002	RADIAL FUSE T 2A	2211	4822 122 33195	100pF 10% 50V
1971	▲ 4822 265 31015	MAINS INLET	2250	4822 126 12882	100nF +80-20% 50V
1974	▲ 4822 276 13277	MAINS SWITCH			
1975	▲ 4822 071 51601	FUSE T 160mA (/00B/05B)	2251	4822 126 12882	100nF +80-20% 50V
			2255	4822 126 11585	22nF +80-20% 25V
CAPACITORS			2350	4822 122 10466	220pF 10% 50V
			2351	4822 122 10459	560pF 10% 50V
			2352	4822 122 10466	220pF 10% 50V
2004	4822 122 33197	1nF 10% 50V	2353	4822 122 10459	560pF 10% 50V
2005	4822 126 11585	22nF +80-20% 25V	2900	4822 126 11585	22nF +80-20% 25V
2006	4822 124 41525	100μF 20% 25V	2901	4822 126 11585	22nF +80-20% 25V
2007	4822 121 51288	100pF 630V	2902	4822 126 11585	22nF +80-20% 25V
2012	4822 122 33197	1nF 10% 50V	2903	4822 126 11585	22nF +80-20% 25V
2013	4822 121 51288	100pF 630V	2904	4822 124 42119	4700μF 20% 25V
2014	4822 126 11585	22nF +80-20% 25V	2905	4822 124 80984	2200μF 20% 25V
2015	4822 124 41525	100μF 20% 25V	2908	4822 124 40242	1μF 20% 63V
2016	4822 124 22339	100μF 16V	2909	4822 124 41525	100μF 20% 25V
2017	4822 124 22339	100μF 16V	2910	4822 124 40248	10μF 20% 63V
2050	4822 122 33195	100pF 10% 50V	2911	4822 126 11585	22nF +80-20% 25V
2051	4822 124 80865	10μF 20% 25V	2912	4822 126 11585	22nF +80-20% 25V
2052	4822 122 33195	100pF 10% 50V	2920	4822 126 11585	22nF +80-20% 25V
2053	4822 126 11585	22nF +80-20% 25V	2921	4822 126 11585	22nF +80-20% 25V
2054	4822 124 41525	100μF 20% 25V	2922	4822 126 11585	22nF +80-20% 25V
2055	4822 122 33195	100pF 10% 50V	2923	4822 126 11585	22nF +80-20% 25V
2056	4822 124 80865	10μF 20% 25V	2924	4822 124 80153	1000μF 20% 16V
2057	4822 122 33195	100pF 10% 50V	2925	4822 126 11585	22nF +80-20% 25V
2058	4822 126 11585	22nF +80-20% 25V	2926	4822 126 11585	22nF +80-20% 25V
2059	4822 124 41525	100μF 20% 25V	2927	4822 124 40433	47μF 20% 25V
2060	4822 124 40246	4,7μF 20% 63V	2934	4822 124 40433	47μF 20% 25V
2061	4822 124 40246	4,7μF 20% 63V	2935	4822 126 11585	22nF +80-20% 25V
2062	4822 124 22339	100μF 16V	2940	4822 126 11585	22nF +80-20% 25V
2063	4822 124 22339	100μF 16V	2941	4822 126 11585	22nF +80-20% 25V
2064	4822 124 22339	100μF 16V	2942	4822 126 11585	22nF +80-20% 25V
2065	4822 124 22339	100μF 16V	2943	5322 124 22094	220μF 20% 50V
2100	4822 124 40248	10μF 20% 63V	2944	4822 124 40242	1μF 20% 63V
2102	4822 126 12785	47nF TUB 50V	2945	4822 124 40246	4,7μF 20% 63V
2103	4822 126 12785	47nF TUB 50V	2946	4822 126 11585	22nF +80-20% 25V
2104	4822 122 33849	150pF 10%Y5P 50V	2970	4822 126 12224	4,7nF 20% 125V
2105	4822 126 12882	100nF +80-20% 50V	2980	4822 121 42408	220nF 5% 63V
2106	4822 126 12882	100nF +80-20% 50V	2981	4822 121 51252	470nF 5% 63V
2200	4822 126 11585	22nF +80-20% 25V	2982	4822 124 41334	470μF 20% 35V
2201	4822 124 41525	100μF 20% 25V	2983	4822 124 80865	10μF 20% 25V
2202	4822 126 11585	22nF +80-20% 25V			
2203	4822 124 41525	100μF 20% 25V			
2204	4822 126 11585	22nF +80-20% 25V			

MECHANICAL PARTS LIST CABINET

1	4822 423 51177	FRONT ASSY
8	4822 410 63442	BUTTON UNIT NOSE
10	4822 410 63443	BUTTON UNIT
14	4822 459 10887	WORDMARK
15	4822 450 61894	IR WINDOW
16	4822 450 62315	WINDOW
44	4822 413 51486	VOLUME KNOB
45	4822 492 51374	SPRING
51	4822 380 20425	REFLECTOR
55	4822 454 12949	DCC LOGO
65	4822 426 51764	TRAY FRONT ASSY
151	4822 444 60843	COVER
188	4822 535 93475	POWER ROD
251	4822 462 41715	FOOT
252	4822 462 41715	FOOT
253	4822 462 41715	FOOT
254	4822 462 41715	FOOT
255	4822 462 41479	FELT
256	4822 462 41479	FELT
257	4822 462 41479	FELT
258	4822 462 41479	FELT
282▲	4822 256 30402	FUSE CARRIER /01B
300▲	4822 321 10831	MAINS CORD /00B/01B
301▲	4822 321 10886	MAINS CORD /05B
308	4822 321 22832	SBC1072 CINCH CABLE
309	4822 321 22832	SBC1072 CINCH CABLE
314	4822 321 61452	CINCH CABLE DIGITAL IN
365	4822 218 10543	REMOTE CONTROLE RD6842/00

Not mentioned parts are only available during production period on special request.

Screws

Self-tapping screw for metal M3x6	: 75,76,77
Self-tapping screw for metal with washer 3x6	: 171
	: 172
	: 173,174,175,176
	: 274,275,276,277,278
Self-tapping screw for metal M3x10	: 206,207
Self-tapping screw for metal M3x15	: 133,134,135,136
	: 200,201,202,203
Self-tapping screw for plastic 3,5x8	: 259,260,261,262
Self-tapping screw for plastic 3x10	: 22,23,24,25,26,27,28,29,30,31,32
	: 33
	: 34,35,36,37
	: 78,79
	: 83,84
	: 268
	: 269,270,271
Self-tapping screw for plastic 3x18	: 280,281

COILS

5001	4822 157 51192	220mH
5020	4822 157 51192	220mH
5100	4822 157 70601	DIGITAL TRAFO
5970 ▲	4822 214 51841	MAINS FILTER

DIODES

6200	4822 130 34278	BZX79-C6V8
6201	4822 130 34278	BZX79-C6V8
6350	4822 130 30621	1N4148
6351	4822 130 30621	1N4148
6355	4822 130 30621	1N4148
6356	4822 130 30621	1N4148
6357	4822 130 30621	1N4148
6358	4822 130 30621	1N4148
6900	4822 130 80291	1N4002GP
6901	4822 130 80291	1N4002GP
6902	4822 130 80291	1N4002GP
6903	4822 130 80291	1N4002GP
6905	4822 130 30621	1N4148
6920	4822 130 80291	1N4002GP
6921	4822 130 80291	1N4002GP
6922	4822 130 80291	1N4002GP
6923	4822 130 80291	1N4002GP
6940	4822 130 80291	1N4002GP
6941	4822 130 34173	BZX79-C5V6
6942	5322 130 34563	BZX79-C2V7
6980	4822 130 80291	1N4002GP
6981	4822 130 80291	1N4002GP
6982	4822 130 30621	1N4148
6983	4822 130 30621	1N4148
6984	4822 130 30621	1N4148
6985	4822 130 31981	BZX79-C3V9
6986	4822 130 30621	1N4148

TRANSISTORS & I.C.'s

7001	4822 209 83163	LM833N
7050	4822 209 83163	LM833N
7200	4822 209 60002	74HC4052N
7201	5322 209 12377	MC34082P
7250	5322 209 11323	74HCU04P
7350	5322 130 44779	BC338-40
7352	4822 130 44197	BC558B
7353	5322 130 44779	BC338-40
7354	5322 130 44779	BC338-40
7355	5322 130 44779	BC338-40
7357	4822 130 44197	BC558B
7358	5322 130 44779	BC338-40
7359	5322 130 44779	BC338-40
7900	4822 209 72868	M5230L
7901	4822 130 63427	BD534
7902	5322 130 42631	BD533
7920	4822 209 12335	L4941

7921	4822 209 72042	MC78L05ACP
7940	4822 209 33379	M5293L
7980	4822 130 40937	BC548B
7981	4822 130 40937	BC548B
7982	4822 130 40937	BC548B
7983	4822 130 44197	BC558B
7984	4822 130 40937	BC548B

FRONT PANEL**MISCELLANEOUS**

	4822 256 92194	FTD HOLDER
1808	5322 242 73697	RESONATOR 8MHz
1810	4822 276 13213	TACT SWITCH
1811	4822 276 13213	TACT SWITCH
1812	4822 276 13213	TACT SWITCH
1814	4822 276 13213	TACT SWITCH
1815	4822 276 13213	TACT SWITCH
1816	4822 276 13213	TACT SWITCH
1817	4822 276 13213	TACT SWITCH
1818	4822 276 13213	TACT SWITCH
1819	4822 276 13213	TACT SWITCH
1820	4822 276 13213	TACT SWITCH
1821	4822 276 13213	TACT SWITCH
1822	4822 276 13213	TACT SWITCH
1823	4822 276 13213	TACT SWITCH
1824	4822 276 13213	TACT SWITCH
1825	4822 276 13213	TACT SWITCH
1826	4822 276 13213	TACT SWITCH
1827	4822 276 13213	TACT SWITCH
1828	4822 276 13213	TACT SWITCH

CAPACITORS

2180	4822 122 33175	2,2nF 20% 50V
2181	4822 122 33175	2,2nF 20% 50V
2182	4822 121 51412	560nF 5% 63V
2183	5322 121 42661	330nF 5% 63V
2184	4822 122 33175	2,2nF 20% 50V
2185	4822 122 33175	2,2nF 20% 50V
2186	5322 121 42661	330nF 5% 63V
2187	4822 121 51412	560nF 5% 63V
2188	4822 122 32654	22nF 10% 63V
2189	4822 122 32654	22nF 10% 63V
2190	4822 124 23624	47μF 20% 16V
2191	4822 124 23624	47μF 20% 16V
2194	4822 124 23624	47μF 20% 16V
2195	4822 124 23624	47μF 20% 16V
2454	4822 124 23624	47μF 20% 16V
2455	4822 122 33809	22nF 20% 50V
2456	4822 124 23624	47μF 20% 16V
2457	4822 122 33809	22nF 20% 50V
2458	5322 122 32448	10pF 5% 50V

RESISTORS

2906	4822 050 11002	1k	1%	0,4W
2907	4822 116 52249	1k8	5%	0,5W
3005	4822 050 25602	5k6	1%	0,6W
3006	4822 050 21003	10k	1%	0,6W
3007	4822 050 27502	7k5	1%	0,6W
3008	4822 050 28202	8k2	1%	0,6W
3009 ▲	4822 052 10478	4Ω7	5%	0,33W
3015	4822 050 25602	5k6	1%	0,6W
3016	4822 050 27502	7k5	1%	0,6W
3017	4822 050 21003	10k	1%	0,6W
3018	4822 050 28202	8k2	1%	0,6W
3019 ▲	4822 052 10478	4Ω7	5%	0,33W
3050	4822 116 52234	100Ω	5%	0,5W
3051	4822 116 52234	100Ω	5%	0,5W
3052	4822 050 11002	1k	1%	0,4W
3053	4822 050 11002	1k	1%	0,4W
3054 ▲	4822 052 10478	4Ω7	5%	0,33W
3055	4822 116 52234	100Ω	5%	0,5W
3056	4822 116 52234	100Ω	5%	0,5W
3057	4822 050 11002	1k	1%	0,4W
3058	4822 050 11002	1k	1%	0,4W
3059 ▲	4822 052 10478	4Ω7	5%	0,33W
3103	4822 116 52199	68Ω	5%	0,5W
3104	4822 116 52201	75Ω	5%	0,5W
3105 ▲	4822 052 10478	4Ω7	5%	0,33W
3200	4822 116 52217	270Ω	5%	0,5W
3201	4822 116 52217	270Ω	5%	0,5W
3202	4822 116 52289	5k6	5%	0,5W
3203	4822 116 52264	27k	5%	0,5W
3204	4822 116 52289	5k6	5%	0,5W
3205	4822 116 52264	27k	5%	0,5W
3206	4822 116 52289	5k6	5%	0,5W
3207	4822 116 52264	27k	5%	0,5W
3208	4822 116 52289	5k6	5%	0,5W
3209	4822 116 52264	27k	5%	0,5W
3210	4822 116 52289	5k6	5%	0,5W
3211	4822 116 52289	5k6	5%	0,5W
3212 ▲	4822 052 10478	4Ω7	5%	0,33W
3213 ▲	4822 052 10478	4Ω7	5%	0,33W
3250	4822 116 52269	3k3	5%	0,5W
3251	4822 116 52269	3k3	5%	0,5W
3255 ▲	4822 052 10478	4Ω7	5%	0,33W
3350	4822 116 52175	100Ω	5%	0,5W
3351	4822 116 52256	2k2	5%	0,5W
3352	4822 116 52175	100Ω	5%	0,5W
3353	4822 116 52175	100Ω	5%	0,5W
3354	4822 116 52233	10k	5%	0,5W
3355	4822 116 52257	22k	5%	0,5W
3356	4822 116 52256	2k2	5%	0,5W
3357	4822 116 52256	2k2	5%	0,5W
3358	4822 116 52283	4k7	5%	0,5W
3360	4822 116 52258	220k	5%	0,5W

3361	4822 116 52175	100Ω	5%	0,5W
3362	4822 116 52175	100Ω	5%	0,5W
3363	4822 116 52175	100Ω	5%	0,5W
3364	4822 116 52256	2k2	5%	0,5W
3365	4822 116 52233	10k	5%	0,5W
3366	4822 116 52256	2k2	5%	0,5W
3367	4822 116 52256	2k2	5%	0,5W
3368	4822 116 52257	22k	5%	0,5W
3369	4822 116 52283	4k7	5%	0,5W
3371	4822 116 52258	220k	5%	0,5W
3900	4822 116 52215	220Ω	5%	0,5W
3901	4822 116 52215	220Ω	5%	0,5W
3902	4822 116 52244	15k	5%	0,5W
3903	4822 050 21501	150Ω	1%	0,6W
3904	4822 116 52269	3k3	5%	0,5W
3905	4822 050 21501	150Ω	1%	0,6W
3906	4822 116 52244	15k	5%	0,5W
3907	4822 116 52244	15k	5%	0,5W
3980	4822 116 52284	47k	5%	0,5W
3981	4822 116 52283	4k7	5%	0,5W
3982	4822 050 24705	4M7	1%	0,6W
3983	4822 116 52245	150k	5%	0,5W
3984	4822 116 52276	3k9	5%	0,5W
3985	4822 116 52233	10k	5%	0,5W
3986	4822 116 52234	100Ω	5%	0,5W
3987	4822 116 52284	47k	5%	0,5W
3988	4822 050 11002	1k	1%	0,4W
3989	4822 116 52244	15k	5%	0,5W

I.R. PANEL			3423	4822 051 20123	12k 5% 0,1W
			3424	4822 051 20823	82k 5% 0,1W
2820	4822 122 33809	22nF 20% 50V	3425	4822 051 20472	4k7 5% 0,1W
7820	4822 214 52009	GP1U58XP	3426 ▲	4822 052 10109	10Ω 5% 0,33W
MICRO & HEADPHONE PANEL			3427	4822 051 20471	470Ω 5% 0,1W
			3430	4822 051 20122	1k2 5% 0,1W
			3431	4822 051 20122	1k2 5% 0,1W
			4000	4822 051 10008	0Ω 5% 0,25W
MISCELLANEOUS			DIODES, TRANSISTORS & I.C.'s		
1410	4822 267 31453	MICROPHONE SOCKET	7400	4822 209 82362	NJM4556D
1415	4822 267 31479	HEADPHONE SOCKET	7415	4822 209 83163	LM833N
CAPACITORS			7430	4822 130 42696	BC818-25
2400	4822 124 41525	100μF 20% 25V	7431	4822 130 42696	BC818-25
2401	4822 124 41525	100μF 20% 25V	MAINS VOLTAGE		
2402	4822 122 33809	22nF 20% 50V	1976	4822 070 31601	FUSE T 160mA /01B
2403	4822 122 33809	22nF 20% 50V	5001 ▲	4822 146 31355	MAINS TRAFO /00B/05B
2404	5322 122 34123	1nF 10% 50V	5001 ▲	4822 146 31396	MAINS TRAFO /01B
2415	5322 122 34123	1nF 10% 50V	5001 ▲	4822 277 21366	VOLTAGE SELECTOR/01B
2416	4822 124 40248	10μF 20% 63V	5001 ▲	4822 444 60655	SELECTOR COVER /01B
2417	5322 122 31866	6,8nF 10% 63V			
2418	5322 122 32654	22nF 10% 63V			
2419	5322 122 32654	22nF 10% 63V			
2420	5322 122 32659	33pF 5% 50V			
2421	4822 122 33496	100nF 10% 63V			
2422	4822 122 33496	100nF 10% 63V			
2423	4822 122 33496	100nF 10% 63V			
2424	4822 124 22339	100μF 16V			
2428	4822 124 41525	100μF 20% 25V			
2429	4822 124 41525	100μF 20% 25V			
2430	5322 122 34123	1nF 10% 50V			
2431	5322 122 34123	1nF 10% 50V			
RESISTORS					
3400	4822 116 52175	100Ω 5% 0,5W			
3401	4822 116 52175	100Ω 5% 0,5W			
3402	4822 101 21199	10kX2 20% 0,025W			
3403	4822 051 20123	12k 5% 0,1W			
3404	4822 051 20123	12k 5% 0,1W			
3405	4822 051 20273	27k 5% 0,1W			
3406	4822 051 20273	27k 5% 0,1W			
3407	4822 051 20121	120Ω 5% 0,1W			
3408	4822 051 20121	120Ω 5% 0,1W			
3409 ▲	4822 052 10109	10Ω 5% 0,33W			
3410 ▲	4822 052 10109	10Ω 5% 0,33W			
3415	4822 051 20472	4k7 5% 0,1W			
3417	4822 051 20103	10k 5% 0,1W			
3418	4822 051 10102	1k 2% 0,25W			
3419 ▲	4822 052 10109	10Ω 5% 0,33W			
3420 ▲	4822 052 10109	10Ω 5% 0,33W			
3421	4822 051 20333	33k 5% 0,1W			
3422	4822 051 20471	470Ω 5% 0,1W			

2459	5322 122 32448	10pF 5% 50V
2460	5322 122 32448	10pF 5% 50V
2461	5322 122 32448	10pF 5% 50V
2800	4822 124 23624	47μF 20% 16V
2801	4822 122 33809	22nF 20% 50V
2802	4822 124 40248	10μF 20% 63V
2803	4822 122 33809	22nF 20% 50V
2804	4822 122 33496	100nF 10% 63V
2805	4822 122 33496	100nF 10% 63V

RESISTORS

3170	4822 051 20123	12k 5% 0,1W
3171	4822 051 20123	12k 5% 0,1W
3172	4822 051 20122	1k2 5% 0,1W
3173	4822 051 20122	1k2 5% 0,1W
3174	4822 051 20224	220k 5% 0,1W
3175	4822 051 20472	4k7 5% 0,1W
3176	4822 051 20103	10k 5% 0,1W
3180	4822 051 20123	12k 5% 0,1W
3181	4822 051 20561	560Ω 5% 0,1W
3182	4822 051 20273	27k 5% 0,1W
3183	4822 051 20123	12k 5% 0,1W
3184	4822 051 20561	560Ω 5% 0,1W
3185	4822 051 20103	10k 5% 0,1W
3186	4822 051 20471	470Ω 5% 0,1W
3187	4822 051 20222	2k2 5% 0,1W
3188	4822 051 20472	4k7 5% 0,1W
3189	4822 051 20473	47k 5% 0,1W
3190	4822 051 10102	1k 2% 0,25W
3191	4822 051 20473	47k 5% 0,1W
3192	4822 051 20473	47k 5% 0,1W
3193	4822 051 20471	470Ω 5% 0,1W
3194	4822 050 21001	100Ω 1% 0,6W
3195	4822 050 21001	100Ω 1% 0,6W
3196	4822 051 10102	1k 2% 0,25W
3198	4822 100 11676	10k 30%LIN 0.2W
3199	4822 100 11676	10k 30%LIN 0.2W
3200	4822 051 20123	12k 5% 0,1W
3201	4822 051 20123	12k 5% 0,1W
3454	4822 117 11139	1k5 1% 0,1W
3455	4822 117 11141	1k8 1% 0,1W
3456	4822 117 11143	3k 1% 0,1W
3457	4822 117 11142	2k4 1% 0,1W
3458	4822 117 11145	4k7 1% 0,1W
3459	4822 117 11146	6k2 1% 0,1W
3460	4822 117 11144	3k9 1% 0,1W
3461	4822 117 11139	1k5 1% 0,1W
3462	4822 117 11141	1k8 1% 0,1W
3463	4822 117 11143	3k 1% 0,1W
3464	4822 117 11142	2k4 1% 0,1W
3465	4822 117 11145	4k7 1% 0,1W
3466	4822 117 11146	6k2 1% 0,1W
3467	4822 117 11144	3k9 1% 0,1W

3468 ▲	4822 052 10109	10Ω 5% 0,33W
3469 ▲	4822 052 10109	10Ω 5% 0,33W
3470	4822 117 10354	22k 1% 0,1W

3471	4822 117 10354	22k 1% 0,1W
3472	4822 117 10833	10k 1% 0,1W
3473	4822 117 10833	10k 1% 0,1W
3800 ▲	4822 052 10108	1Ω 5% 0,33W
3801 ▲	4822 052 10108	1Ω 5% 0,33W

3802 ▲	4822 052 10108	1Ω 5% 0,33W
3803 ▲	4822 052 10478	4Ω7 5% 0,33W
3806	4822 051 20331	330Ω 5% 0,1W
3807	4822 051 20472	4k7 5% 0,1W
3808	4822 051 20472	4k7 5% 0,1W

3809	4822 051 20223	22k 5% 0,1W
3810	4822 116 90877	4k7X8 5%
3811	4822 116 90877	4k7X8 5%
3812	4822 051 20223	22k 5% 0,1W
3813	4822 051 20103	10k 5% 0,1W

3814	4822 051 20103	10k 5% 0,1W
3815	4822 051 20103	10k 5% 0,1W
3816	4822 051 20103	10k 5% 0,1W
3819	4822 051 20473	47k 5% 0,1W
3820	4822 051 20103	10k 5% 0,1W

3821	4822 051 20103	10k 5% 0,1W
3822	4822 051 20103	10k 5% 0,1W
3823	4822 051 20103	10k 5% 0,1W

COILS

5800	4822 157 51462	10μH
5801	4822 157 51462	10μH
5802	4822 157 51462	10μH
5803	4822 157 51462	10μH

DIODES, TRANSISTORS & IC'S

6180	4822 130 34278	BZX79-C6V8
6181	4822 130 34278	BZX79-C6V8
6802	4822 130 82978	LTL-16kPE
7005	4822 130 91403	DISPLAY 14-BK-336GK
7170	5322 130 41982	BC848B
7171	5322 130 41982	BC848B
7172	5322 130 41983	BC858B
7180	4822 209 31134	CXA1331S
7181	5322 130 42012	BC858
7182	5322 130 61207	BC848
7183	5322 130 42012	BC858
7451	5322 209 61483	74HC4051D
7452	5322 209 61483	74HC4051D
7455	4822 209 83274	NJM4560D
7800	4822 209 33369	TMP87CP70F
7998	4822 209 33381	TMP87PP71F
7801	4822 209 33378	MN1382-S
7806	5322 209 63719	ST24C02A
7811	5322 130 42012	BC858

3836	4822 051 30229	22Ω	5%	0,062W
3837	4822 051 30279	27Ω	5%	0,062W
3838	4822 051 30101	100Ω	5%	0,062W
3839	4822 051 30152	1k5	5%	0,062W
3840	4822 051 30561	560Ω	5%	0,062W
3841	4822 051 30182	1k8	5%	0,062W
3842	4822 051 30331	330Ω	5%	0,062W
3843	4822 051 30331	330Ω	5%	0,062W
3844	4822 051 30109	10Ω	5%	0,062W
3845	4822 051 30109	10Ω	5%	0,062W
3846	4822 051 30109	10Ω	5%	0,062W
3847	4822 051 30109	10Ω	5%	0,062W
3848	4822 051 30152	1k5	5%	0,062W
3849	4822 051 30152	1k5	5%	0,062W
3850	4822 051 30274	270k	5%	0,062W
3851	4822 051 30333	33k	5%	0,062W
3852	4822 051 30102	1k	5%	0,062W
3853	4822 051 30183	18k	5%	0,062W
3854	4822 051 30333	33k	5%	0,062W
3855	4822 051 30102	1k	5%	0,062W
3856	4822 051 30183	18k	5%	0,062W
3857	4822 051 30274	270k	5%	0,062W
3858	4822 051 30152	1k5	5%	0,062W
3859	4822 051 30152	1k5	5%	0,062W
3860	4822 116 83933	15k	1%	0,1W
3861	4822 051 30473	47k	5%	0,062W
3862	4822 117 11154	1k	1%	0,1W
3863	4822 117 10356	39k	1%	0,2W
3864	4822 117 11137	68k	1%	0,1W
3865	4822 117 11147	270k	1%	0,1W
3866	4822 117 11148	56k	1%	0,1W
3868	4822 117 10965	18k	1%	0,1W
3869	4822 117 11149	82k	1%	0,1W
3870	4822 116 83933	15k	1%	0,1W
3871	4822 051 30473	47k	5%	0,062W
3872	4822 117 11154	1k	1%	0,1W
3873	4822 117 10356	39k	1%	0,2W
3874	4822 117 11137	68k	1%	0,1W
3875	4822 117 11147	270k	1%	0,1W
3876	4822 117 11148	56k	1%	0,1W
3878	4822 117 10965	18k	1%	0,1W
3879	4822 117 11149	82k	1%	0,1W
3880	4822 051 30222	2k2	5%	0,062W
3881	4822 051 30399	39Ω	5%	0,062W
3882	4822 051 30399	39Ω	5%	0,062W
3883	4822 051 30399	39Ω	5%	0,062W
3884	4822 051 30399	39Ω	5%	0,062W
3885	4822 051 30122	1k2	5%	0,062W
3886	4822 051 30159	15Ω	5%	0,062W
3887	4822 051 20228	2Ω2	5%	0,1W
3888	4822 101 11318	POTMETER	22k	LIN
3889	4822 051 30103	10k	5%	0,062W
3890	4822 051 30473	47k	5%	0,062W
3891	4822 051 30221	220Ω	5%	0,062W

3892	4822 051 30683	68k	5%	0,062W
3893	4822 051 30822	8k2	5%	0,062W
3894	4822 051 30333	33k	5%	0,062W
3895	4822 051 30562	5k6	5%	0,062W
3896	4822 051 30104	100k	5%	0,062W
3897	4822 051 30229	22Ω	5%	0,062W
3898	4822 051 30229	22Ω	5%	0,062W
3899	4822 051 30229	22Ω	5%	0,062W
3900	4822 051 30229	22Ω	5%	0,062W
3901	4822 051 30229	22Ω	5%	0,062W
3902	4822 051 30229	22Ω	5%	0,062W
3903	4822 051 30229	22Ω	5%	0,062W
3904	4822 051 30229	22Ω	5%	0,062W
3905	4822 051 30229	22Ω	5%	0,062W
3906	4822 051 30472	4k7	5%	0,062W
3907	4822 051 30271	270Ω	5%	0,062W
3908	4822 051 30561	560Ω	5%	0,062W
3909	4822 051 30561	560Ω	5%	0,062W
3910	4822 051 30688	6Ω8	5%	0,062W
3911	4822 051 30222	2k2	5%	0,062W
3912	4822 051 30392	3k9	5%	0,062W
3913	4822 051 30102	1k	5%	0,062W
3914	4822 051 30821	820Ω	5%	0,062W
3915	4822 051 30688	6Ω8	5%	0,062W

COILS

5835	4822 157 70298	15μH
5836	4822 157 70298	15μH
5837	4822 157 70298	15μH
5860	4822 157 63622	0.47μH

DIODES, TRANSISTORS & I.C.'s

6800	5322 130 31928	BAS16
7800	4822 130 42675	BC818
7801	5322 130 41982	BC848B
7802	4822 130 42675	BC818
7803	5322 130 41982	BC848B
7804	5322 130 41982	BC848B
7805	4822 209 31995	TDA1317
7830	5322 130 41982	BC848B
7835	5322 130 41982	BC848B
7860	4822 209 33392	MC34074AD
7861	5322 130 41982	BC848B
7871	5322 130 41982	BC848B
7882	4822 209 33396	TDA1319T/N1
7883	4822 130 42615	BC817-40
7900	4822 209 33411	MC78L05ACD
7910	5322 130 41982	BC848B
7911	5322 130 41979	BC808
7912	5322 130 41982	BC848B

READ/WRITE PANEL

CAPACITORS

2800	4822 126 13193	4,7nF 10% 63V
2801	5322 126 11583	10nF 10% 63V
2802	5322 126 11583	10nF 10% 63V
2803	5322 126 11583	10nF 10% 63V
2804	5322 126 11583	10nF 10% 63V
2805	5322 126 11583	10nF 10% 63V
2806	5322 126 11583	10nF 10% 63V
2807	5322 126 11583	10nF 10% 63V
2808	5322 126 11583	10nF 10% 63V
2809	4822 126 13189	1μF 80-20%16V
2810	4822 126 13189	1μF 80-20%16V
2811	4822 126 13189	1μF 80-20%16V
2812	4822 126 13189	1μF 80-20%16V
2813	4822 126 13189	1μF 80-20%16V
2814	4822 126 13189	1μF 80-20%16V
2815	4822 126 13189	1μF 80-20%16V
2816	4822 126 13189	1μF 80-20%16V
2817	4822 126 13189	1μF 80-20%16V
2818	4822 126 13189	1μF 80-20%16V
2819	4822 124 80867	10μF 20% 16V
2820	5322 126 11583	10nF 10% 63V
2821	5322 126 11583	10nF 10% 63V
2822	4822 126 13196	100nF 10% 25V
2823	4822 126 13196	100nF 10% 25V
2824	4822 124 80867	10μF 20% 16V
2825	4822 124 80867	10μF 20% 16V
2826	4822 124 80867	10μF 20% 16V
2827	4822 124 80867	10μF 20% 16V
2828	5322 126 11583	10nF 10% 63V
2829	5322 126 11583	10nF 10% 63V
2830	5322 126 11583	10nF 10% 63V
2835	5322 126 11578	1nF 10% 63V
2836	4822 126 13192	2,2nF 10% 63V
2837	4822 126 13192	2,2nF 10% 63V
2838	4822 126 13196	100nF 10% 25V
2839	4822 122 33775	39pF 5% 50V
2840	4822 126 13196	100nF 10% 25V
2841	4822 126 13196	100nF 10% 25V
2842	4822 124 80867	10μF 20% 16V
2843	4822 124 80867	10μF 20% 16V
2844	4822 126 13191	470pF 10% 63V
2845	4822 126 13191	470pF 10% 63V
2846	4822 126 13189	1μF 80-20%16V
2847	5322 126 11583	10nF 10% 63V
2860	4822 126 13189	1μF 80-20%16V
2861	4822 122 32627	2,7nF 10% 50V
2862	4822 122 32627	2,7nF 10% 50V
2863	4822 126 10525	8,2nF 10% 63V
2864	4822 126 10525	8,2nF 10% 63V

2865	4822 122 33761	22pF 5% 50V
2866	4822 122 33761	22pF 5% 50V
2870	4822 122 32627	2,7nF 10% 50V
2871	4822 122 32627	2,7nF 10% 50V
2872	4822 126 10525	8,2nF 10% 63V
2873	4822 126 10525	8,2nF 10% 63V
2874	4822 126 13189	1μF 80-20%16V
2880	4822 124 80867	10μF 20% 16V
2881	4822 126 13196	100nF 10% 25V
2882	4822 126 13196	100nF 10% 25V
2883	4822 124 80867	10μF 20% 16V
2884	5322 126 11579	3,3nF 10% 63V
2885	5322 126 11579	3,3nF 10% 63V
2886	5322 126 11579	3,3nF 10% 63V
2887	5322 126 11579	3,3nF 10% 63V
2888	5322 126 11579	3,3nF 10% 63V
2889	5322 126 11579	3,3nF 10% 63V
2890	5322 126 11579	3,3nF 10% 63V
2891	5322 126 11579	3,3nF 10% 63V
2892	5322 126 11579	3,3nF 10% 63V
2910	4822 124 80867	10μF 20% 16V
2911	5322 126 11583	10nF 10% 63V
2912	4822 126 13196	100nF 10% 25V
2914	4822 124 80867	10μF 20% 16V
2999	4822 126 13196	100nF 10% 25V

RESISTORS

3000	4822 051 30223	22k 5% 0,062W
3800	4822 051 30561	560Ω 5% 0,062W
3801	4822 051 30561	560Ω 5% 0,062W
3802	4822 051 30561	560Ω 5% 0,062W
3803	4822 051 30561	560Ω 5% 0,062W
3804	4822 051 30561	560Ω 5% 0,062W
3805	4822 051 30561	560Ω 5% 0,062W
3806	4822 051 30561	560Ω 5% 0,062W
3807	4822 051 30561	560Ω 5% 0,062W
3808	4822 051 30561	560Ω 5% 0,062W
3809	4822 051 30681	680Ω 5% 0,062W
3810	4822 051 30222	2k2 5% 0,062W
3811	4822 051 30473	47k 5% 0,062W
3812	4822 051 30104	100k 5% 0,062W
3813	4822 051 30103	10k 5% 0,062W
3814	4822 051 30104	100k 5% 0,062W
3815	4822 051 30472	4k7 5% 0,062W
3816	4822 051 30562	5k6 5% 0,062W
3817	4822 051 30393	39k 5% 0,062W
3818	4822 051 30479	47Ω 5% 0,062W
3819	4822 051 30104	100k 5% 0,062W
3830	4822 051 30103	10k 5% 0,062W
3831	4822 051 30103	10k 5% 0,062W
3832	4822 051 30103	10k 5% 0,062W
3833	4822 051 30103	10k 5% 0,062W
3835	4822 051 30229	22Ω 5% 0,062W

3641	4822 051 20122	1k2 5% 0,1W	7633	4822 130 61207	BC848
3642	4822 051 20471	470Ω 5% 0,1W	7700	4822 209 33388	UPD78P056GC
3700	4822 117 10833	10k 1% 0,1W	7701	4822 209 30739	MC74HC04AD
3701	4822 117 10833	10k 1% 0,1W	7702	4822 209 33389	MC74HC32AD
3702	4822 117 10833	10k 1% 0,1W	7730	4822 209 60792	74HC4053D
3703	4822 117 10833	10k 1% 0,1W	7760	4822 209 33403	TDA1305T/N2
3704	4822 117 10833	10k 1% 0,1W	7780	4822 209 33397	SAA7366T
3705 ▲	4822 117 11151	1Ω 5%	TAPE/DRIVE PANEL		
3706 ▲	4822 117 11151	1Ω 5%			
3707	4822 051 20105	1M 5% 0,1W	RESONATORS		
3708	4822 051 20472	4k7 5% 0,1W			
3709	4822 117 10833	10k 1% 0,1W	1500	4822 242 81738	RESONATOR 11.059 MHz
3710	4822 117 10833	10k 1% 0,1W	CAPACITORS		
3711	4822 117 10833	10k 1% 0,1W			
3712	4822 117 10833	10k 1% 0,1W	2500	4822 122 33809	22nF 20% 50V
3761 ▲	4822 117 11151	1Ω 5%	2503	4822 124 40433	47μF 20% 25V
3762 ▲	4822 117 11152	4Ω7 5%	2504	5322 122 32531	100pF 5% 50V
3764	4822 117 10833	10k 1% 0,1W	2521	4822 122 33809	22nF 20% 50V
3765	4822 051 10102	1k 2% 0,25W	2522	4822 124 40433	47μF 20% 25V
3780	4822 051 20624	620k 5% 0,1W	2525	4822 124 40243	1,5μF 20% 63V
3781	4822 117 10833	10k 1% 0,1W	2545	4822 126 13189	1μF 80-20% 16V
3782	4822 051 20334	330k 5% 0,1W	2550	4822 122 33809	22nF 20% 50V
3783	4822 051 20472	4k7 5% 0,1W	2570	4822 124 40433	47μF 20% 25V
3784	4822 051 20472	4k7 5% 0,1W	2571	4822 122 33809	22nF 20% 50V
3785	4822 117 10833	10k 1% 0,1W	2572	4822 122 33216	270pF 5% 50V
3786	4822 051 20333	33k 5% 0,1W	2573	4822 124 40433	47μF 20% 25V
3787 ▲	4822 117 11152	4Ω7 5%	2574	4822 122 33809	22nF 20% 50V
3788	4822 051 20271	270Ω 5% 0,1W	2575	4822 124 40433	47μF 20% 25V
3789	4822 051 20271	270Ω 5% 0,1W	2576	4822 122 33809	22nF 20% 50V
3790	4822 051 20562	5k6 5% 0,1W	2580	4822 122 33809	22nF 20% 50V
3791	4822 051 20562	5k6 5% 0,1W	2581	4822 122 33809	22nF 20% 50V
COILS			2599	4822 122 33496	100nF 10% 63V
5600	4822 157 71267	COIL	RESISTORS		
5601	4822 157 71267	COIL			
5602	4822 157 71267	COIL	3500	4822 051 20105	1M 5% 0,1W
5603	4822 157 71267	COIL	3501 ▲	4822 052 10478	4Ω7 5% 0,33W
5630	4822 157 70298	15μH	3502	4822 117 11158	62k 5% 0,1W
5700	4822 157 71267	COIL	3503	4822 051 10102	1k 2% 0,25W
5701	4822 157 71267	COIL	3504	4822 117 11158	62k 5% 0,1W
5702	4822 157 71267	COIL	3506	4822 117 10833	10k 1% 0,1W
DIODES, TRANSISTORS & I.C.'s			3507	4822 117 10833	10k 1% 0,1W
6600	5322 130 31928	BAS16	3508	4822 051 20224	220k 5% 0,1W
6630	4822 130 80654	BZX84-B3V9	3509	4822 051 10102	1k 2% 0,25W
6631	5322 130 31928	BAS16	3513	4822 051 20224	220k 5% 0,1W
6632	4822 130 80654	BZX84-B3V9	3525	4822 051 20333	33k 5% 0,1W
7600	4822 209 33401	SAA2013H	3526 ▲	4822 052 10229	22Ω 5% 0,33W
7610	4822 209 33399	SAA2003H	3527	4822 051 20104	100k 5% 0,1W
7620	4822 209 33395	TDA1315H/N1	3528	4822 051 20823	82k 5% 0,1W
7630	4822 209 33402	SAA2023GP	3530	4822 051 20472	4k7 5% 0,1W
7631	4822 209 33387	MN41C4256ASJ	3531	4822 117 10833	10k 1% 0,1W
7632	4822 130 61207	BC848	3532	4822 117 11139	1k5 1% 0,1W

DIGITAL PANEL**RESONATORS**

1610	4822 242 81359	CRYSTAL 22.579 MHz
1611	4822 242 81358	CRYSTAL 24.576 MHz
1700	4822 242 81739	RESONATOR 4.91 MHz

CAPACITORS

2600	4822 122 33496	100nF 10% 63V
2601	4822 122 33809	22nF 20% 50V
2602	4822 122 33809	22nF 20% 50V
2603	4822 122 33809	22nF 20% 50V
2605	4822 122 33809	22nF 20% 50V
2606	4822 122 33809	22nF 20% 50V
2607	4822 122 33809	22nF 20% 50V
2610	4822 122 33809	22nF 20% 50V
2611	4822 122 33809	22nF 20% 50V
2612	4822 122 33809	22nF 20% 50V
2613	5322 122 32481	15pF 5% 50V
2614	5322 122 31946	27pF 5%NP0 50V
2615	5322 122 32481	15pF 5% 50V
2616	5322 122 31946	27pF 5%NP0 50V
2617	5322 122 32448	10pF 5% 50V
2618	5322 122 32448	10pF 5% 50V
2620	5322 122 34123	1nF 10% 50V
2621	5322 122 32659	33pF 5% 50V
2622	4822 122 31981	33nF +-0,5pF 50V
2623	4822 122 33809	22nF 20% 50V
2624	4822 122 33496	100nF 10% 63V
2625	4822 122 33809	22nF 20% 50V
2626	4822 122 33809	22nF 20% 50V
2627	4822 122 33064	330nF 80% 25V
2630	4822 122 33809	22nF 20% 50V
2631	4822 122 33515	82pF 5% 63V
2632	4822 122 33496	100nF 10% 63V
2633	4822 122 33496	100nF 10% 63V
2634	5322 122 32531	100pF 5% 50V
2635	4822 122 33809	22nF 20% 50V
2636	4822 122 33809	22nF 20% 50V
2637	4822 122 33809	22nF 20% 50V
2638	4822 122 33809	22nF 20% 50V
2639	4822 122 33809	22nF 20% 50V
2640	4822 122 33809	22nF 20% 50V
2641	4822 122 33809	22nF 20% 50V
2642	4822 124 80866	47µF 20% 6,3V
2643	4822 122 32927	220nF +80-20% 50V
2644	4822 122 33809	22nF 20% 50V
2645	4822 122 33496	100nF 10% 63V
2700	5322 122 32531	100pF 5% 50V
2701	4822 122 33809	22nF 20% 50V
2702	4822 122 33809	22nF 20% 50V
2705	4822 122 33809	22nF 20% 50V

2706	4822 122 33809	22nF 20% 50V
2707	4822 122 33809	22nF 20% 50V
2760	4822 122 33809	22nF 20% 50V
2762	4822 122 31746	1000pF 2% 63V
2763	4822 122 31746	1000pF 2% 63V
2764	4822 124 80867	10µF 20% 16V
2766	4822 122 33809	22nF 20% 50V
2767	4822 124 80866	47µF 20% 6,3V
2768	4822 122 33809	22nF 20% 50V
2780	4822 124 80866	47µF 20% 6,3V
2781	4822 122 33809	22nF 20% 50V
2782	4822 122 33809	22nF 20% 50V
2783	4822 124 80866	47µF 20% 6,3V
2786	4822 122 33809	22nF 20% 50V
2787	4822 124 80866	47µF 20% 6,3V
2788	4822 122 33809	22nF 20% 50V
2790	4822 122 33809	22nF 20% 50V
2791	4822 124 80866	47µF 20% 6,3V
2792	4822 124 80866	47µF 20% 6,3V
2793	4822 122 33809	22nF 20% 50V
2795	4822 122 33809	22nF 20% 50V
2796	4822 122 33809	22nF 20% 50V
2797	4822 122 33809	22nF 20% 50V
2798	4822 122 33809	22nF 20% 50V
2799	4822 122 33809	22nF 20% 50V
2800	4822 122 33809	22nF 20% 50V

RESISTORS

3600	4822 051 20333	33k 5% 0,1W
3601 ▲	4822 117 11151	1Ω 5%
3610	4822 051 20105	1M 5% 0,1W
3611	4822 051 10102	1k 2% 0,25W
3612	4822 051 20105	1M 5% 0,1W
3613	4822 051 10102	1k 2% 0,25W
3615 ▲	4822 117 11151	1Ω 5%
3619	4822 051 20479	470Ω 5% 0,1W
3620	4822 051 20101	100Ω 5% 0,1W
3621	4822 051 20271	270Ω 5% 0,1W
3622 ▲	4822 117 11151	1Ω 5%
3623	4822 051 20221	220Ω 5% 0,1W
3624	4822 051 20221	220Ω 5% 0,1W
3625	4822 051 20221	220Ω 5% 0,1W
3630	4822 051 20121	120Ω 5% 0,1W
3631	4822 051 20221	220Ω 5% 0,1W
3632	4822 117 10834	47k 1% 0,1W
3633	4822 117 10833	10k 1% 0,1W
3634	4822 051 20472	4k7 5% 0,1W
3635 ▲	4822 117 11151	1Ω 5%
3636 ▲	4822 117 11151	1Ω 5%
3637	4822 051 20471	470Ω 5% 0,1W
3638	4822 051 20471	470Ω 5% 0,1W
3639	4822 051 20331	330Ω 5% 0,1W
3640	4822 051 20331	330Ω 5% 0,1W

3533	4822 051 20122	1k2 5% 0,1W
3534	4822 051 10102	1k 2% 0,25W
3535	4822 051 20472	4k7 5% 0,1W
3536	4822 117 10834	47k 1% 0,1W
3537	4822 051 20133	13k 5% 0,1W
3538	4822 051 20133	13k 5% 0,1W
3539	4822 051 20472	4k7 5% 0,1W
3540	4822 051 20472	4k7 5% 0,1W
3541	4822 117 10834	47k 1% 0,1W
3542	5322 100 11542	4k7 30%LIN 0,1W
3543	5322 100 11542	4k7 30%LIN 0,1W
3544	4822 051 20822	8k2 5% 0,1W
3545	4822 051 20472	4k7 5% 0,1W
3546	4822 117 10833	10k 1% 0,1W
3547	4822 116 83933	15k 1% 0,1W
3548	4822 117 11384	2k7 1% 0,1W
3550	4822 051 20331	330Ω 5% 0,1W
3551	4822 051 10102	1k 2% 0,25W
3552	4822 117 11383	12k 1% 0,1W
3553	4822 117 11148	56k 1% 0,1W
3554	4822 051 20221	220Ω 5% 0,1W
3555 ▲	4822 052 10229	22Ω 5% 0,33W
3556	4822 051 20471	470Ω 5% 0,1W
3557	4822 051 10102	1k 2% 0,25W
3558	4822 051 20153	15k 5% 0,1W
3560	4822 051 20472	4k7 5% 0,1W
3561	4822 117 10833	10k 1% 0,1W
3562	4822 051 20331	330Ω 5% 0,1W
3563	4822 051 10102	1k 2% 0,25W
3564	4822 051 20271	270Ω 5% 0,1W
3565	4822 050 22709	27Ω 1% 0,6W
3566	4822 050 22709	27Ω 1% 0,6W
3567	4822 051 20472	4k7 5% 0,1W
3568	4822 117 10833	10k 1% 0,1W
3569	4822 051 20331	330Ω 5% 0,1W
3570 ▲	4822 117 11152	4Ω 5%
3571 ▲	4822 117 11151	1Ω 5%
3572 ▲	4822 117 11151	1Ω 5%
3573	4822 051 20181	180Ω 5% 0,1W
3574	4822 051 10102	1k 2% 0,25W
3580	4822 116 30468	220Ω 5% 0,21W
3581	4822 116 30468	220Ω 5% 0,21W

COILS

5570	4822 157 71152	150μH
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DIODES, TRANSISTORS & I.C.'s

6550	4822 130 81755	BZX84-B4V3
6560	5322 130 31928	BAS16
6561	5322 130 31928	BAS16
6570	4822 130 32911	BYV10-30
6571	4822 130 83665	BZX84-B16
7500	4822 209 33915	P87C52EBPN-CV5454-1N

7505	4822 209 31615	LM324A
7510	4822 209 70672	LM358N
7520	5322 130 42136	BC848C
7522	5322 130 42136	BC848C
7523	5322 130 42136	BC848C
7524	5322 130 42012	BC858
7540	5322 130 42136	BC848C
7541	5322 130 42136	BC848C
7542	4822 130 42655	BC808-40
7551	5322 130 42136	BC848C
7552	5322 130 42012	BC858
7560	5322 130 42136	BC848C
7561	5322 130 42136	BC848C
7562	4822 130 41344	BC337-40
7563	5322 130 42136	BC848C
7564	4822 130 42616	BC818-40
7570	4822 209 60059	MC34063A
7580	4822 209 33391	BA6246N
7581	4822 209 33393	MC74HC4066D

U01855

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**PHILIPS**

Art. Code:	50	SI	Wichtig für die Werkstatt!
Sachgebiet:	DCC		
Memo:	de 10stk	Nr.	50001
		Datum:	10.04.96

Service Information

Betrifft: DCC730, DCC951
1) Demo Mode
2) Copy Prohibit
Verteiler: S4, F1

1a) Demo Mode

Wird das Gerät eingeschaltet und befindet es sich im Stop-Betrieb, kann die Scroll Taste gedrückt werden, um den Demo Mode im Display ablaufen zu lassen. Durch drücken der Stop Taste kann der Demo Mode wieder rückgängig gemacht werden.

b) Demo Mode für den Händler (Trade Mode)

Wird die Scroll- Taste gleichzeitig mit der Power On Taste gedrückt, schaltet sich das Gerät in den Trade Mode (Verkaufsmode). Das heißt, das Gerät kann bedient werden aber die Schublade kann nicht mehr herausgefahren werden. Um diese Einstellung rückgängig zu machen, muß auf der Fernbedienung die Open/Close Taste gedrückt werden, oder im Service Mode das EEPROM gelöscht werden.

2) Nur DCC951 "COPY PROHIBIT"

Bei einigen Geräten kann es vorkommen, daß bei digitalem Überspielen von vorbespielten CD's oder MD's auf DCC im Display des DCC 951 "COPY PROHIBIT" zu lesen ist. Somit ist keine digitale Copy möglich. Dies geschieht speziell bei Sony CD- und MD-Spielern. Um dieses zu verhindern und eine einmalige digital Aufnahme möglich zu machen, muß auf dem Digitalboard des DCC Moduls der Digitale Microprozessor IC 7700 durch einen Prozessor mit dem Softwarestand D28 ersetzt werden.

Bestellnummer 4822 209 12972

Die Schaltung und der Prozessor befindet sich im Service Manual auf Seite 8-12.

MC-Service

4822 830 50001